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CROSTHWAITE, Peter

J. H. 60

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T H E
E N S I G N
O F
P E A C E.

S H E W I N G,

How the HEALTH, both of BODY and MIND, may be preserved, and even revived by the mild and attenuating Power of a most valuable and cheap Medicine. Its singular and most excellent Property is to subdue the FLESH to the Will of the SPIRIT; by which happy Means, Mankind may enjoy a State of Temperance instead of Intemperance, and a State of Virtue instead of Vice. The continued Use of this MEDICINE irradiates most Diseases, and is seriously recommended to the People of this Island.

But I keep under my Body, and bring it into Subjection: Lest that by any Means when I have preached to others, I my self should be a cast away. 1 Cor. ix. 27.

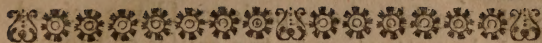
By a FRIENDLY TRAVELLER.

L O N D O N :

Printed for J. WILKIE, No. 71, St Paul's Church Yard, 1775.

A circular black ink stamp is located in the lower-left quadrant of the page. The text 'WELCOME' is curved along the top inner edge, 'LIBRARY' is in the center, and 'INSTITUTE' is curved along the bottom inner edge.





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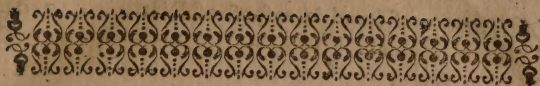
MANY eminent Philosophers and Divines have laboured with unwearied assiduity for the general good of Mankind, and left behind them a multiplicity of excellent rules, in order to instruct and lead men in the paths of virtue and temperance. I do not pretend to any great degree of knowledge in Philosophy, Divinity, or Physic; yet am certain, that I have hit upon a Medicine which will reduce the Flesh (in a great measure) to the Will of the Spirit, and induce men to walk with pleasure through life, in a more than ordinary good state of bodily health. A great deal has been said in several pompous advertisements respecting the cure of diseases, though few, I believe, have answered the end proposed. 'Tis far from my design to impose upon the public; and, I hope, such as make a sufficient trial of the Medicine will have no reason to complain of its effects. The useful observations I have made on the dispositions,

ii ADVERTISEMENT.

actions, &c. of mankind in different parts of the world; the experience I have gained by being attentive to the causes of the various changes produced in my own constitution, and my having studied the nature and properties of the human structure, and the causes which bring on the many diseases incident to the human body, together with the great benefit I have received from the use of this Medicine, have enabled me to write this book.

It is my first effort, and from thence, I hope, trivial faults will be overlooked; as nothing but a warm attachment for the well being of society induced me to make this public.

N. B. Let it be observed, that, by the word Temperance, I mean the whole of the Non-naturals, Exercise itself not excepted.



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T H E
E N S I G N
O F
P E A C E, &c.

O Intemperance! How hast thou depraved the human species? What a surprizing ascendancy hast thou gained over their senses in the last half century only? Is it not through thee that innumerable diseases have taken hold on us, many of which are terrible, and transmitted to posterity epidemical, and often seize with violence on the bodies of men that are really temperate, how truly lamentable then is the state of the sons of Adam? I do here likewise charge thee, intemperance, with being the author of almost every other evil incident to the human body, and I may say soul too, as it is well known, that if the body be debilitated, or hath lost its vigour through intemperance, the soul likewise suffers, and is thereby rendered incapable of performing its functions properly, and too often becomes vicious. Having laid most diseases to the charge of intemperance, and also most other evils, which are at this time very numerous and very deplorable, it may be proper here to shew what temperance consists in.

TEMPERANCE, *or how to make a prudent use of the non-naturals.*

Health is a proper disposition of the body, and

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all its parts for performing their respective functions, and this consists in a due connexion: It is likewise applied to the mind, and then it makes a just disposition of the rational powers, and passions, to perform their proper actions, and this in a great measure depends on bodily health. Dr Williams.

The continuance of health depends principally on the six non-naturals, viz. Air, food, exercise, the passions, evacuation and retention, sleeping, and waking. Air in medicine makes one, and not the least powerful of the non-naturals, as upon it the very life of animals depends. It is susceptible of different qualities, hot, moist, cold, dry, serene, pure, and temperate. It is subject to variations more or less sudden, and to be mixed with impure, corrupted, contagious, metallic, sulphureous exhalations, which are all prejudicial to health; the best quality of air is to be pure and sweet, void of all bad exhalations neither too hot, cold, dry, nor moist. The sudden changes of the air are inevitable and dangerous, whence proceed a great number of diseases which reign in the spring and autumn towards the approach of winter. Hospitals, camps, and where the earth is just thrown up, are generally unhealthy, on account of the bad exhalations. Lighted charcoal in a close place, fills the air with sulphureous particles, which are unwholesome, and sometimes kill the strongest persons. Too hot an air, if it be dry, disposes to malignant fevers; if moist, it produces diary, and putrid fevers. Agues are epidemic in the fens of Cambridgeshire, the hundreds of Essex, and in some parts of Kent, on account
of

of the vapours, which weaken the fibres of the body, and obstruct the powers of the skin; besides, a cold, and moist constitution of the air produces coughs, distillations, and rheumatic pains. Hæctic and consumptive people are in great danger both in very hot, and very cold weather. When the passage through the pores of the skin is stopt by cold, the patient is either apt to fall into a looseness, or to have his legs swelled, and the asthmatic symptoms increased.

Aliment is what ever is capable of nourishing the animal body. The loss which we sustain daily makes it necessary that it should be repaired by substances analogous to these of our body; such as aliment and drink, the stimuluses to which are hunger and thirst; wherefore it is necessary to know in general their kinds, and principal qualities, in order to make a proper choice. The principal and most general aliment is bread, which is made of wheat, rye, barley, and Turkey corn, that of wheat is the most nourishing, barley is dry, and rye is laxative; the crust is most easy of digestion, the crum is more oily and heavy. The other farinaceous substances are beans, pease, and lentiles; they nourish much, but are heavy, windy, and viscous, and consequently by constant use are apt to cause obstructions. Rice, barley, and oats, properly prepared, are moistening, emollient, and restorative. Nuts, almonds, and chefnuts, are full of a nourishing oil, but are hard of digestion. Fruits which are pulpous and tart, abound with water, and are refreshing moistening, and sedative, appeasing the too rapid motion of the blood, quenching thirst, digesting easily, such as strawberries, gooseberries, currants, apricots, and figs;

as also peaches, pears, and apples: These should be eaten ripe, and in a small quantity; but they are windy, and therefore are best boiled or baked. Pot herbs and roots, are less nourishing than the mealy substances. Lettuce, succory, sorrel, purslain, refresh, moisten, loosen the belly, and appease the orgasm of the blood. Artichokes, celerery, cresses, asparagus and parsley, are a little heating. Truffles, champignons, garlic, shallots, pepper, cloves, nutmegs, and mustard, heat very much. Animals are either terrestrial, volatile, aquatic, or amphibious: These differ greatly with regard to their kind, age, manner of living and substance. Fish nourish the least of all animals, because they abound with phlegm. Young animals have a plenty of a soft nourishing juice, but that of the older is more nourishing. The juice of the old are spirituous, gelatinous, and agreeable to the taste; but the flesh is hard, and difficult of digestion. Wild animals are more light, and digestible than the tame. Their white parts contain a very succulent substance of tender fibres, and yield a soft aliment, and are easy of digestion.

Milk is properly nothing but chyle, and consequently does not need any great preparation in the stomach. It is a good aliment for persons whose stomachs are languid, and for children. New laid eggs yield very good nourishment, are easy of digestion, and agree with persons of exhausted bodies, and those that are old. Chocolate is a very agreeable nourishing liquor, strengthens the stomach, restores the body, helps the digestion, and softens sharp humours. It is proper for persons of a weak stomach. Drinks restore the fluid parts of the body; they are a vehicle for other aliments, and render
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the digestion easy. Water is the principal, most salutary, and most necessary for life, of which soft water is most certainly the best. It is the greatest dissolvent that we have. Water alone has cured many indispositions, but too much of it relaxes and weakens the solids, and causes many infirmities. It is not to be drank cold when the body is heated. Wine taken too freely is prejudicial to health, but moderately it strengthens the solids, and facilitates digestion; its excess, as well as all other spirituous liquors, hardens the fibres, affects the nerves, diminishes the secretions, destroys the appetite, and induces chronical diseases in abundance. That malt liquor is accounted the best, which is specifically lightest, and not saturated with too gross a substance; for then it does not offend the stomach, but passes readily through the excretories of the body, and particularly by urine. The best kind of beer does not render the head heavy, nor grow sour upon the stomach, nor inflates the hypochondria. This depends greatly upon the goodness of the water, the proper boiling of the ingredients, and the due fermentation.

All thick, muddy, heavy, stale beer, not sufficiently boiled, offends the head, generates wind, obstructions, the strangury, asthma, and the cholic. Tea tho' praised by many, is, without doubt, hurtful to many constitutions, except it be mixed with a good quantity of milk. Broths abound with a soft, moistening, and nourishing gelly, whence they are good restoratives. Meat that is roasted, contains an excellent nourishing juice, the moist parts being dissipated by the fire. Things that are fried are only proper for strong stomachs. Spices, vinegar, &c. may correct the faults of the aliment when

taken in a small quantity, but are pernicious when used to create an appetite; whence made dishes are commonly bad. The appetite excited by the quality, and diversity of the viands, provokes persons to eat more than they ought, which causes indigestions, frequent indispositions, and sometimes dangerous diseases; therefore the skill of the cooks of these times, contribute greatly to shorten their masters lives. The method of preserving health, therefore, is to live upon plain, simple aliment, lightly seasoned, and in quantity agreeable to the age, strength of the stomach, season of the year, sex, constitution, and chiefly to what nature is found by experience to require; for it is as great a fault to take too much as too little. Perfect digestion is the best rule for regulating a meal, especially if the person is more brisk and lively after a repast than before. We have examples of many persons, who by their temperance, have lived to a very advanced age; therefore those that are fond of life and health, should imitate their regimen. Excess in eating and drinking are extremely pernicious. Neither malt liquor, nor spirits, nor yet wine, are necessary to people in a good state of health, but may each in their turn be of service in particular indispositions if used prudently. The first drinks of mankind were certainly water and milk; but the love of luxury, and debauchery, hath introduced the art of preparing intoxicating drinks out of vegetables; and thus the most nourishing, and most wholesome fruits of the earth, are destroyed in great abundance, in order to put men out of their senses, load them with obstinate diseases, and render them a burthen to themselves and civil society; mean time the industrious poor
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are in want, and greatly to be lamentd. O intemperance! intemperance! worfe than all the plagues of Egypt; how haft thou confounded the fouls of men? Are not their ideas confused? Are not the confciences of thy votaries hardened to fuch a temper, as not to feel for the indigent. Here I return from the digreffion, and dwell again upon the non-naturals.

Persons of a delicate constitution, or who are juft recovered from a difeafe, fhould ufe foft, light aliments, agreeable to the ftomach; for they make the beft chyle. Acid, tenacious, vifcous, aliment, pies of all kinds, things that are fat and of a blackifh fubftance, are generally unfit for chyli-fication, or render the chyle bad. Strong, robuft, young perfons, who ufe much exercife, ought to eat more than others, and may be more free with the groffer kind of aliment; for their ftomachs being ftrong, the lighter kind of food would digest too eafily, and be diffipated too foon. Children, whose ftomachs are weak, and veffels fine, ought to ufe a light, thin, flender, foft aliment, eafy of digeftion; wherefore infants fhould be fed with fluid milk, to avoid caufing obftructions in their fine and delicate veffels. Confequently the milk of a nurfe, newly brought to bed, is more agreeable to infants than that of one who has been delivered five or fix months, and whose milk begins to have too great a confiftence. Nurfes fhould obferve an exact regimen, and fhun all forts of violent paffions; for they difturb digeftion, and communicate their bad effects to their children. When infants are weaned, they fhould not be accuftomed to fpirituious liquors, and ftrong food, efpecially the falt, and fmoke-dried, which are hard of digeftion, and yield bad nourishment.

nishment. The best method is to eat often, and little at a time. In old age the fluids are thick, the secretions slow, and the solids more stiff than in youth; wherefore they require less food, and of a more soft, nourishing, moistening, kind, easy of digestion, and not too much at a time, especially in the evening. In all times of life, especially in old age, the constant and immoderate use of salt, and smoke dried meat, acid and aromatic vegetables, as well as spirituous liquors, tend to harden and stiffen the parts of the body, instead of affording good nourishment, besides the digestion of these aliments is difficult and render the blood so acrid as to hurt the capillary vessels. However, an acquired habit is hard to be left off, and we find many persons enjoy a pretty good state of health, when their meat and drink is very indifferent, because they are become customary; custom being a second nature, all great changes ought to be brought about insensibly. Hunger shews the best time of eating, but custom confines us to certain hours. Persons who find no inconveniences from dining and supping every day, need not change their manner of life. In youth wherein there is a great dissipation, and in age when strength is wanting, and when little is eaten at a time, something taken between meals is not amiss. However, it is necessary to observe, that when the stomach is bad, persons should not begin to eat again till the last meal is digested. When a person is greatly fatigued and his spirits dissipated, it will be necessary to rest before eating. In cases of distress and sorrow, the aliment should be very light, and small in quantity, because the stomach is weak at those times. In the summer, when the spirits and fluid

parts

parts are apt to evaporate, the aliment should be light, moist, fluid, and easy of digestion, to repair the loss with the greater speed; whereas in winter the stomach will admit of grosser food. Temperament, among physicians, denotes the same with constitution, or a certain habitude of the humours of the human body, whereby it may be denominated hot, cold, moist, bilious, sanguine, phlegmatic, melancholic, &c. According to Boerhaave, moistening, diluting, and temperating substances are a proper diet for persons of a hot and acid temperament; and on the contrary, all heating things are prejudicial to them: whereas in persons of a cold and moist habit, just the reverse obtains. To persons of a sanguineous temperament, evacuating and temperating medicines are beneficial, and heating or drastic stimulating things pernicious.

Persons of a melancholy temperament are greatly injured by hot, drying, and acrid substances: Whereas moistening, refrigerating, relaxing, emollient substances, and such as gently dissolve without acrimony, are beneficial to them. I cannot willingly leave this article, viz. diet, without blaming people in regard to the bad management of flesh and milk. There are multitudes of people who think it a good piece of œconomy to provide large quantities of flesh meat against winter, and in order to preserve it, they lay upon it a great quantity of salt, that it may keep four or five months without stinking; this method however doth not prevent the most nourishing parts of it from turning putrid, whether it be pickled, or whether it be smoke dried; such meat is therefore unwholesome, after being salted a few weeks, and

one pound of fresh meat is better and more nourishing, than two pound of such salted meat, which hath been long kept; and thus the most nourishing substance is in a great measure wasted. Now suppose I used the above imprudent method in my own house, whilst the hand-labour of the industrious poor cannot afford them a comfortable substance, I should be uncharitable as well as these sons of ingratitude, I say ingratitude, who keep useless dogs, and horses, &c. to devour the fruits of the earth. Is not this ingratitude to God, the benefactor of all mankind, who hath liberally bestowed fruits, and fruitful seasons for the support of man? The rich men, in many parts of Asia, who have neither received the light of the law or gospel, are much more charitable than the generality of their equals in wealth in Europe; but then the former are generally very temperate, and therefore retain a natural feeling for their fellow creatures. Dr Cheyne extols a milk diet in his writings, particularly in his method of cure in diseases of body and mind: See his essays, on the gout, health, and long life, &c. It is very certain that men may live for years upon milk alone, and perform all the actions of life, and have all the solid, and fluid parts of their bodies perfectly elaborated. Notwithstanding the European nations boast of a superior knowledge to the rest of the world, yet the Indians in Asia, make a much better use of that excellent animal the cow, in regard to diet than the Europeans do in general: I have frequently asked them why they would not kill a cow; because say they, the cows feed our children, and plough our ground, and their answer was always to the

the above purport. It seems to me that in Europe, and especially in my native country, Britain, much more milk, and much less flesh meat, should be used, as voluptuousness hath introduced even new diseases, effeminacy, a depravation of appetite, and also of the Soul itself. In this effeminate age, an upright man of sound judgment may honestly tell us, that the milk produced from one cow in one year, even in the country, is of more real worth than all her parts when slaughtered, by fifty per cent. provided she be properly fed with grass, good hay, and good water; why then such destruction amongst female calves, and young cows? What but the highest folly of a degenerate race of pitiable mortals. Cows will produce a white substance, if they be fed in part upon rotten grains; but this is making a second bad use of that precious substance corn, by rendering the cows unsound, and their milk unwholesome. The greatest cleanliness ought to be used, by people who have the ordering of milk, and in summer they cannot keep it too cold, nor in too good an air, neither should they keep it too long at any season of the year: However, the selfish and base disposition of man, is now growing to such an amazing height, that half the milk which is sold is scarce fit for healthy people, much less for delicate people, and tender infants. What a mortifying scene is this! This one circumstance drives thousands into the very midst of intemperance, and is no doubt the means of the death of many infants. When mechanics, &c. in great towns find they cannot procure good milk for their money, viscid, and glutinous drink with viscid, and

and glutinous cheese, and a little bread is substituted for breakfast and supper; and thus they contract a habit for drinking which generally produces many sad, and dismal effects. In what manner then shall I level against those base and secret enemies of mankind, who adulterate that excellent substance milk? They are worse than highwaymen, because they are more hurtful to the community in general; and as they drive men into drunkenness, they are a means of breeding highwaymen, &c. and may live in fearful expectation of a just reward for their works. What shall I say to the man who hath ground of his own, contiguous to a large town, sufficient to keep ten good milk cows, but through avarice procures rotten grains, (for such they are before they are cold) and other trash for a trifle, which enables him to keep fifteen, whose milk he sells to the town. This man is a knave, imposes on a great number of people, at the expence perhaps of many lives, and drives many, who will not take his bait, into intemperance and misery. He is a curse to himself, and a scourge to his neighbours; for had an honest man kept but ten cows on the same ground, and fed them properly, their milk might have been a real blessing to the town, and prevented many dismal and fatal disasters. There are in many places large quantities of milk sold after the cream hath been taken of it. If this milk be good in nature, hath been cleanly, and honestly done by, it may be exceeding good at the age of twelve or fifteen hours, but it is too often kept to the age of twenty-four, thirty-six, or even more hours, hath frequently a bad taste when sold; yet alas! great quantities of this sort comes to the lot of the industrious

dustrious poor; now it is very easy to foresee what unnatural acid ferments, and painful conflicts such diet must create in the bowels of people who are tender, and especially in the children of this effeminate age, who are frequently tormented with acid crudities, be their diet ever so good. Many and pitiable are the diseases which affect the indigent through the use of bad milk, and other trash which they are partly obliged to eat; however, I would not have them despair of relief as there still remains a prospect of better times.

They who keep milk until it be hurtful to the people who use it, most daringly insult divine providence; they abuse the precious gifts of God and except they reform may expect the just reward of their works.

E X E R C I S E.

EXercise comes now to be treated of: It is such an agitation of the body as produces salutary effects in the animal oeconomy. Dr Cheyne observes that exercise is indispensably necessary to preserve the body in due plight; without exercise, the juices will thicken, the nerves relax, the joints stiffen; and on these disorders chronical diseases and a crazy old age will ensue.

The body may be considered as a system of tubes and glands admirably adapted throughout as a proper engine for the soul to work with: Exercise ferments the humours, casts them into their proper channels, throws off redundances, and helps nature in those secret distributions without which the body cannot subsist in its vigour, nor the soul act with chearfulness.

Had not exercise been absolutely necessary for our well being, nature would not have given such

pliancy to every part as necessary produces those compressions, extensions, dilatations, and all other kind of motions necessary for the preservation of such a system of tubes and glands: And that we might not want inducements to such an exercise of the body, riches and honour, even food and raiment are not to be come at without the toil of the hands and sweat of the brow: He further observes, that these organs of the body which are most used always become the strongest. The legs, feet, and thighs of chairmen, the arms and hands of watermen, the back and shoulders of porters, grow thick and strong by use. Of all the kinds of exercise, there is none which conduces so much to the health, or is so well accommodated to the body, as that of riding, which is less laborious, and expensive of spirits than any other: Dr Sydenham is very lavish in its praise; Dr Mead too recommends it in the conclusion of his *Monita & Præcepta*. Every man ought to lay himself under some sort of necessity to take exercise.

Indolence, like all other vices, when indulged, gains ground, and at length becomes agreeable: Hence many, who were fond of exercise in the early part of life become quite averse to it afterwards. This is the case with most hypochondriac and gouty people. Indolence not only occasions diseases, and renders men useless to society, but promotes all manner of vice. To say a man is idle, is, perhaps, in the strongest terms, to call him vicious. The mind, if not engaged in some useful pursuit, is constantly in quest of ideal pleasures, or impressed with the apprehension of some imaginary evil. From these sources proceed most of the miseries of mankind. Surely man never was intended to be idle. Inactivity frustrates the very
design

design of his creation. An active life is the best guardian of virtue, and the greatest preservative of health. A lazy person is, of all others, the most incapable of pleasure; a wretch who slumbering, in a perpetual lethargy, cannot be stimulated to action, or roused from his insensibility. He is his own burthen, and would fain fly from himself, but is not able; that eternal inappetency, which he drags about with him, assumes a thousand different forms for his own punishment and that of others; now it is lassitude—he feels himself dull, heavy, and not able so much as to move a finger; it is now indisposition—he finds himself oppressed by a disorder which he cannot define; at other times it is a melancholy, of which he knows not the cause, and his temper is always uneven, captious, and sple- netic. If his word may be taken, no man was ever so ill treated; he lives neglected, suffers unpitied, and should he die would be unlamented by the whole circle of his acquaintance, who are so destitute of compassion as to wish he was already in his grave. This, indeed, would be to wish him well; for the gloomy habit of his mind, his indolence, and want of exercise, will shortly realize all his imaginary disorders; and he will be to-morrow, if he is not to-day, pale, dejected, languid, emaciated, and totally debilitated in body and mind: and is life a benefit to those who preserve it on such conditions as these? Supineness and effeminacy have ruined more constitutions by far than excessive labour; and moderate exercise, far from being destructive to health, establishes and strengthens it, cheers and enlivens the soul, by which man may have great pleasure in living, and also in being of service to his fellow creatures if he

is otherwise temperate. As we are members of a society, the assistance of which is necessary to our well being; to merit this assistance, we ought in our turn to serve that society with alacrity and zeal; to discharge our duty with languor and indifference is not to acquit ourselves of the obligation; and nothing can be well done which is done with reluctance. There are a hundred different employments, all which concur in promoting the common interest. Let us choose one among those which we have abilities to execute; let our state and capacity be consulted, and our decision be in favour of that employment which appears upon the whole to be most eligible; but the choice once made, let it be a point of honour to excel in that profession to which we have given the preference. By the following may be understood what the ancient heathens thought of idleness: Solon ordered that strict enquiry should be made among the inhabitants of Athens how each lived in his own house, and those who were found idle were severely punished: Pisistratus going a progress through his kingdom, saw several men walking together in a field, who, on his approach, fell at his feet, imploring his charity: If you want beasts to plough your lands, said he, I will give you some; if destitute of ground, I will share mine with you: If seed be wanting to sow it, repair to my granary and be furnished; for I encourage none but those that work. By this behaviour there were in a short time no beggars in the realm. Aelian.

Laziness is so pernicious, that it not only opens the way to all manner of debaucheries, but it also spoils the most virtuously inclined: as for example, Alcibiades, Antonius, one of the triumvirate, Mutianus,

tianus, and many other persons, who, whilst they kept in action, did things worthy of immortal memory; but when once they suffered their warlike disposition to relax, sunk into voluptuousness, and every vice it brings with it. Plut. Lives.

The PASSIONS.

THE Passions come next in course among the non-naturals; they produce very sensible effects. Joy, anger, and fear, are the principal. In the two first, the spirits are hurried with too great rapidity; whereas, in fear or dread, they are, as it were, curbed and concentrated: whence we may conclude that they have a very bad effect upon health, and therefore it will be best to keep them within bounds as much as possible, and to preserve an inward serenity, calmness, and tranquility. Continual sorrow and anguish of mind render the fluids thick, and generate viscid and acid crudities in the stomach, and at length render the body unapt for a due circulation; whence proceed obstructions of the viscera and many chronical diseases. Anger constricts the bilious vessels in particular, and causes too great an evacuation of the bile, produces strictures in the stomach and duodenum; whence the bilious humours are amassed and corrupted, laying a foundation for vomiting, bilious fevers and the cardialgia. Dr Williams. The passions have great influence both in the cause and cure of diseases: and how the mind acts upon matter will in all probability ever remain a secret. It is sufficient for us to know that there is established a reciprocal influence betwixt the mental and corporeal parts, and that whatever disorders the one likewise hurts the other,

The passion of anger ruffles the mind, distorts the countenance, hurries on the circulation of the blood, and disorders the whole vital and animal functions: it often occasions fevers, and other acute diseases, and sometimes occasions sudden death. This passion is peculiarly hurtful to the delicate, and those of weak nerves. It hath been known that a hysteric woman hath lost her life in a violent fit of anger: all such ought to guard against the excess of this passion with the utmost care. Such as value health, should avoid violent gusts of anger as they would the most deadly infection. They ought never to indulge resentment, but to endeavour at all times to keep their mind calm and serene. Nothing tends so much to the health of the body as a constant tranquility of mind. The influence of fear, both in occasioning and aggravating diseases, is very great. Fear and anxiety, by depressing the spirits, predispose us to diseases, and often render those fatal which an undaunted mind would overcome. Sudden fear has generally violent effects; epileptic fits and other convulsive disorders are often occasioned by it; hence the danger of that practice, so common among young people, of frightening one another: by this many have lost their lives, and others have been rendered useless ever after. It is dangerous to tamper with human passions.

They may easily be thrown into such disorder as never again to act regularly: but the gradual effects of fear prove more generally hurtful. The constant dread of some future evil, by dwelling upon the mind, often occasions the very evil itself. Hence it comes to pass, that so many die of these diseases which they long had a dread of, or
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which some accident of foolish prediction had impressed on their minds. This often happens to women in child-bed: many of those who die, in that situation are impressed with the notion of their death a long while before it happens, and there is reason to believe that such impressions are often the cause of it.

Grief is the most destructive of all the passions: its effects are permanent, and when it sinks deep into the mind it generally proves fatal. Anger and fear, being of a more violent nature, seldom last long; but grief often changes into a fixed melancholy, which preys upon the spirits, and wastes the constitution. We should beware of indulging this passion. It may generally be conquered at the beginning; but when it has gained strength, all our attempts become vain. Change of ideas is as necessary for health as change of posture: when the mind dwells long upon one object, especially of a disagreeable nature, it hurts the whole functions of the body. Thus grief indulged, spoils the digestion, and destroys the appetite; by that means the spirits are depressed, the nerves relaxed, the bowels inflated with wind, and the humours for want of fresh supplies of chyle vitiated. Thus many an excellent constitution has been ruined by a family-misfortune, or any thing that occasioned excessive grief. It hath already been observed, that exercise is absolutely necessary for the health of the body, but it is no less so for that of the mind. Indolence nourishes grief: when the mind has nothing else to think of but calamities, no wonder that it dwells there. Few people who pursue business with attention are hurt by grief. Instead of abstracting ourselves
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from the world or business, when misfortunes happen, we ought to engage in it with more than usual attention, to discharge with double diligence the functions of our station, and to mix with friends of an easy social temper. Some when overwhelmed with grief betake themselves to drinking: this is making the cure worse than the disease. It seldom fails to end in the ruin of fortune, character, and constitution. Innocent amusements are by no means to be neglected: these, by leading the mind insensibly to the contemplation of agreeable objects, help to dispel the gloom which misfortunes cast over it. They make time seem less tedious, and have many other happy effects.—Dr Buchan.

S L E E P.

SLEEP is that state wherein the body appearing perfectly at rest, external objects move the organs of sense, as usual, without exciting the usual sensations. Every one knows that in sleep there is a cessation from action. When waking, we walk, discourse, move this or that limb, &c. but in natural and undisturbed rest, there is nothing of all these; that is, whereas being awake, we perform several motions by the voluntary contraction of our muscles; when asleep, these muscles only are contracted whose action is in a manner voluntary, or to which the mind has always so constantly determined the spirits, that it does it by a habit without the intervention of the reasoning faculty; such are those of the heart and breast: so that there is at this time, a relaxing or looseness of the moving fibres of the several members, or at least such a quiet position and state of them, by which all the antagonist muscles are in an equilibrium and equality of action, not overpowering

powering one another: for this indeed seems to be one great design of sleep to recover to the parts over-stretched with labour, their former tone and force; and therefore we do naturally, when composing ourselves to rest, put our body into that posture which most favours the particular wearied limbs, and conduces to this end. In the next place, it is very plain that there is in sleep, not only a rest and suspension from acting of most of our bodily organs, but even of our thinking faculty too; that is, to prevent cavils, a ceasing from such thoughts as when waking we are exercised about, which we do reflect upon, and will to employ our minds with; for tho' dreams are thoughts, yet they are but imperfect and incoherent ones, and are indeed either so faint and languid representations as to be consistent with our sleep as some may be, or else if they be strong and lively, they are as every one knows, the interruption and disturbance of it. From hence it will follow, that the motion of the arterial fluid must be more sedate, even, and regular, in the time of sleeping than waking; for besides the various alterations, which in the latter state this receives from the several passions of the mind, the very contractions of the muscles themselves, in exercise of the body, do differently forward its course: whereas in sleep, the force of the heart and the organs of respiration being more constant and uniform, gives it a more calm and equally continued impulse. Hence also it will come to pass, that the influx of the liquor of the nerves into the organs of the body; as also its reflux towards the brain is, in sleep, either none or very inconsiderable; that is, that this fluid has, at this time, but little or no motion; for it is
muscular

muscular action and sensation that require it to be thus determined this way or that, which are now hardly any, and yet by the arrival of the blood at the brain, this juice will still be separated there, fit to be derived into its canals or tubes; so that by this means there will be a kind of accumulation or laying up in store of spirits for the offices and requirements of waking. Thus we may, in short, look upon this time as the time of wearing out, or the destruction of, the animal fabric; and the time of sleep, as that in which it is repaired and recruited; and not only on the account we have just mentioned, concerning the nervous liquor, but also with respect to all the other parts, as well fluid as solid; for action does necessarily, by degrees, impair the springs and organs; and in motion something is continually abraded, and struck off from the distractile fibres, which cannot be otherwise restored than by their being at rest from tension. Besides that, such a regular and steady course of the blood as we have observed to be in sleep, is by far more fit and proper for nutrition or an apposition of parts to the vessels which an uneven hurry of it is more apt to tear off and wash away. Dr Williams. An antient maintains that the time we pass in sleep is, by many degrees, more agreeable and sweet than that in which we are awake; the one is full of repose, and the other of disquiet. We can know no joy when waking, that we feel not more exquisite in sleep.

A second antient maintains, that the truly innocent, in this life, have a taste in sleep of those immortal joys ordained to be their portion in another. This was doubtless the case with the generality of mankind formerly; but alas! how

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is the scene changed; they were temperate, we are intemperate; they were virtuous, we are in general vicious: their vigorous constitutions could not be idle, and therefore they had great pleasure in sleeping: we in general, but more especially the rich, who ought to set virtuous examples to the poorer sort, which follow them, are a set of indolent people, therefore have very little pleasure either asleep or awake. It hath been the opinion of the learned, in all ages, that too much sleep dulls the understanding, enervates the soul, and fills the body with gross humours. St Barnard to excite the religious, under his care, to wakefulness, tells them, that they ought to remember that all the time passed in sleep, beyond what is required by nature, was misused; for that in sleep nothing could be done either for the glory of God, or the salvation of our souls. Pliny says he must be a wretch indeed, and truly worthy of contempt, who sleeps because he has nothing else to do: And Demosthenes, that a thinking soul can never want employment. Had Plato, Seneca, Euripides, Sophocles, Aristotle, Homer, or many other eminent men been indulgers of sleep, we should neither have had morals nor philosophy to instruct, nor poetry to delight us.

All the assistance our geniuses receive from books, or our own application, is owing to a vigorous opposing the invasions of drowsiness. One of the most eminent fathers of the church looks on giving way to sleep, to be among the number of the most deadly sins, because it not only renders us unable to do any good action for the time, but also makes us by degrees too slothful to endeavour at all at any thing praise worthy. The activity of our
minds,

minds, the structure of our bodies, the vigour and mobility of our organs, and above all, our continually returning necessities, demonstrate that the hand which formed us, formed us for a busy and active life; and the end for which the creator designed us is undoubtedly the best to which we can possibly attain. That the necessity of labour ought to be regarded as a punishment, is a mean and forbidding opinion, invented by the effeminate and lazy; on the contrary, if God had prohibited labour, such prohibition might justly have been deemed a token of his displeasure, for inaction is a kind of lethargy equally pernicious to the mind and body.

I have been treating of temperance, and shewing how to make a prudent use of the non-naturals; and before I quit this subject, must add a short extract to it, taken from Dr Cadogan's excellent treatise on the gout and all chronic diseases, for the benefit of such as are too fond of indulgence. "Inactivity forms obstructions, in
 "these exquisitely fine parts upon which the health
 "and vigour both of body and mind depend
 "entirely, and lays the foundation of many
 "diseases to come, which the industrious and
 "active never feel. No man can have these
 "delightful sensations, who lives two days with
 "the same blood, but must be languid and
 "spiritless: in a state of inactivity the old humours pass off slowly, and the insensible perspiration is inconsiderable: in a state of indolence they do not pass off either so soon or
 "so regularly as they ought; hence the breath
 "and perspiration of indolent people are never
 "sweet. Is it not strange, that many would
 "sooner take a vomit or purge than a walk?

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“ This indolence must inevitably lay the foundation of general disease ! ”.

“ Rouse ye, then, my countrymen, whilst it is time, and shake off that morbid and destructive vice: it is a vice fraught with the most tremendous consequences; for whilst a man is burthened with it, he is neither fit to live nor die well.” Nine in ten of all the chronic diseases in the world, particularly the gout, owe their first rise to intemperance. Indeed, I cannot allow him to be strictly temperate who drinks any wine or strong liquor at all. If you want something to give you an appetite, seek it by labour. Whatever is hardened or seasoned, so as to keep long before it be eaten, ought not to be eaten at all, for it will never dissolve in the stomach. The fumes arising from fermented liquors, of any kind, have been known sometimes to kill at a stroke. Wine alone produces more diseases than can well be imagined; the stomach wants wine no more than the nose does snuff. Water is the element that dilutes and carries off crudities and indigestion. Every great degree of vexation, whether in the shape of anger, envy, resentment, discontent, or sorrow, has most destructive effects upon the vitals of the body, whether sudden and violent, or slow and lasting. Whoever is long vexed, must certainly want nourishment; it is in sleep that all nourishment is performed. We complain of a bad constitution, when perhaps we have sported away a very good one.

Dr Cadogan is not the only one who justly condemns artificial drink: numbers of eminent authors might be quoted to shew that there is scarce any need of it. Dr Buchan very judiciously

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observes,

observes, that men who never taste strong liquors are not only able to endure more fatigue, but also live much longer than those who use them daily; but says he, suppose strong liquors did enable a man to do more work, they must nevertheless waste the powers of life, and of course occasion premature old age. They keep up a constant fever, which wastes the spirits, heats and inflames the blood, and predisposes the body to numberless diseases.

Of the baneful consequences of INTEMPERANCE, and the happy effects of its opposite TEMPERANCE.

THE following is introduced on purpose to set the intemperate at variance with their evil habits, in order that they may, with a stronger resolution, embrace my pleasant and delightful method of subduing that monstrous and destructive tyrant, which threatens no less than the depopulation of the earth. First of drunkenness. Drinking to excess is a vice which is but seldom unaccompanied by others: rapes, murders, all kinds of mischiefs, have been the consequence. If Lot had not drank too much wine, he had never committed incest with his daughters: Gen. 19th. The son of St Cyril, being overpowered with wine, killed his father, and his mother when she was great with child, wounded two of his sisters, and violated another. After the Persian delicacies had corrupted the sobriety of Alexander, he became an excessive lover of wine; and to authorise it in others, he proclaimed rewards to those who drank most, and caused a great cup to be made which he called after his own name Alexander; which presenting one day full of wine to Calisthenes, he refused it, saying, if I drink out of an Alexander

Alexander I shall have need of an Esculapius; which severe jest so enraged the King, that he made him be put into a cage with his dogs, where he soon after died, having swallowed poison thro' the impatience of his shameful captivity: Plut. in his life. However, the same Alexander was one of the most generous and forgiving princes, before his soul was debased by intemperance, witness the following: he paid the most strict observance to his mother Olympia, in every thing which concerned not the affairs of government; but being deprived of that, which her ambitious soul took most delight in, she became so incensed, that she not only treated him with opprobrious language, but entered into secret combinations with his enemies: all which, tho' he very well knew, he forebore taking any notice of; and when Antipater wrote him a long letter, reciting the many enterprizes she had engaged in against the tranquility of the state, he read it without the least emotion; and as soon as he had done, Antipater knows not, said he, that one tear of a mother blots out a thousand such accusations: Plut. in his life. After the first ages of the world, no nation retained the virtue of sobriety like the Greeks and Romans: Lycost, in the theatre of humane life. And for this very reason, no other nations on earth could vie with them for strength of body and mind, nor in any noble action whatever. The drinking wine was looked on as so dangerous, that the Roman ladies were forbid the use of it; and the better to palliate that prescription, the same law permitted them to wear robes of silk, coronets of gold and jewels, and all other ornaments on their heads and bodies.

The Emperor Frederick, third of that name, having no child, consulted the physicians, who told him, that if the Empreſs would drink wine ſhe would certainly conceive; on which he replied, that if there was no other remedy, he muſt be contented to die without an heir; for he choſe rather that ſhe ſhould remain barren, and as ſhe was, than become fruitful, and be given to drinking wine.

The ſame princeſs, being informed of what her huſband had answered, ſaid that if he had commanded her to die, or drink wine, ſhe would have preferred the bitterneſs of death to the ſweetneſs of that liquor: *Æneas Sylvius*.

Gorgo, daughter of king Cleomenes, having received orders from her father to give a reward to a man who had learned to make excellent wine, ſaid to him, I obey with an ill heart; ſince by making this wine, ſo rare, thou tempteſt man to become more delicate and leſs virtuous: *Plut.* in his notable ſayings of the Lacedemonians.

Cyrus, the great Perſian monarch, gave in his youth a teſtimony of that ſobriety he afterwards maintained; for, being aſked by his grandfather, *Aſtyages*, why he reſuſed to drink wine? becauſe, answered he, I obſerved that yeſterday being the celebration of your nativity, none who had drank wine roſe from the table with the right uſe of their ſenſes.

Epaminondas, the greateſt general and philoſopher of his time, was ſo great a lover of temperance and frugality, that being invited to ſup at a friend's houſe, and finding the table covered with great variety of delicates, he roſe and went away very much diſobliged, ſaying, he thought he had
been

been called to take part of a friendly repast, not to be treated like a glutton. Plut. in his life.

Pompey the Great always lived with great sobriety, and gave a notable testimony how much he loved that virtue when on a sick bed; for his physician having ordered him some plovers, which his servants said were hard to be got, it not being the season of the year for them, unless at Lucullus's, who kept these birds all the year for his own eating; he forbid them to send there for any; saying, no, Pompey shall not owe his life to the delicacy of an epicure; I would rather trust to the gods for the recovery of my health than encourage voluptuousness, such as Lucullus's: Plut. in the life of Lucullus and of Pompey.

Galen, prince of physicians, doubtless was temperate, having passed all his life, which lasted an hundred and forty years, without being troubled with any indisposition: Fulgos. Abstinence is not only a virtue, but a kind of salutary policy, since there are few bodily disorders but may be rectified, if not wholly cured by it; and as to those of the mind, the effects are easily seen on it, by the debility intemperance occasions in all its faculties: Strabo. I hope my readers will make a serious reflection on the last part of the above paragraph, it being most assuredly true; and sorry am I, when I reflect what little regard is paid to keeping that most noble spark, the soul, in its greatest vigour. Daniel and his companions avoided the voluptuousness of a royal table, lived only on bread, beans, and water: Dan. i, 4. St John the Baptist passed the greatest part of his life in the desert, eating nothing but locusts and wild honey: St Matthew chap. iii. Hannibal

eat the same provisions with the meanest of his soldiers: Lycoft. And where was there a greater general? Maxentius, Bishop of Poictiers, lived on no other food but barley bread and water: Marulus. Milton had the greatest averfion to all kinds of ftrong liquor, and lived temperate; and notwithstanding his blindnefs, he took bodily exercife: he was one of the wonders of the age in which he lived, and his works will be a lafting monument of the unparalleled greatnefs of his genius. I come now to fay a few words in praife of a very good man, which is gone but as yefter-day; his conftitution would not allow him to follow the voluptuous fashions of the prefent times, therefore his foul was not debafed by intemperance. I am fpeaking of the late Lord Lyttleton: he was always of a tender conftitution; and it was by the greatest regularity and fobriety, that his life was preferved to the age of fixty-four; yet his fortitude, refignation, and piety, was that of a good man and a chriftian; and he, in his laft hours, faid, he would not change the pleafing confolation of a good confcience for the poffeffion of the univerfe. This truly great man, it is to be hoped, will be followed by others of his rank whilft it is time, which may be conducive to promote a reformation in the inferior claffes of men: and let fuch as are inclined to have a further proof of the happy effects of temperance, read the lives of the greatest and beft of men, and they will find that they were generally very temperate.

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L U S T.

LUST not only perverts the senses of a man, but is also a fire, which, in the end, consumes him. It is the destruction of beauty, it makes the face wan and yellow, it debilitates the limbs, it occasions gout, sciatica, cholic, pains in the head and stomach, scorbutic humours and leprosy; in a word, it shortens the life, obscures the mind, and, as Hosea says, makes rotten the heart. The Locrians had a law established by Seleucus, that condemned all those found guilty of this vice to have their eyes plucked out, and this was so strictly observed, that his own son being convicted, was about to be punished in that manner, when all the chiefs of the people interceding for him, the noble law-giver ordered, that he should be deprived of but one eye; and to satisfy the statute, he had one of his own plucked out, chusing rather to endure one half of the punishment than either infringe the law, or his son should suffer the whole: Guido. bituricens. titul de amicitia. Teudefille, King of Spain, was deprived of his life and kingdom by the husband of a lady whom he had ravished. Roderigo, of Spain, was also slain by the Saracens in revenge of their monarch, whose daughter he had violated: Plut. in his life. Tarquin, King of Rome, was deprived of his kingdom for the rape committed by one of his sons on Lucrece, a Roman matron; after which regal authority became so odious to the people, that they resolved none should ever more bear the title of King over them: they immediately converted the monarchical government into that of democracy, and abolished all

all their former laws, instead of which they sent to Athens for those which Solon had established, and strictly adhered to them, giving them the name of the laws of the twelve tables. Appius Claudius, having attempted to ravish Virginia, the daughter of Virginius, a senator of Rome, the remorseless father slew her with his own hands to save the dishonour of his house; after which the whole decemvirate were banished, and their form of government changed into the consulary. The Emperor, Commodus, not being able to satisfy his immoderate lust with three hundred concubines, whom he kept in his palace, committed incest with his own sisters as Caligula had done; the one was killed by his wife, the other strangled by a courtesan. Sardanapalus, King of Babylon, was a man of such inordinate lust, that he passed his whole time among women, habited like them, which rendered him so odious to the people, that they resolved to dethrone him: his effeminacy taking from him the power of making any vigorous opposition to the rebels, and despairing of safety, he shut himself up in his palace, which he had rendered impregnable, with all his concubines: fire being put to it, this miserable monarch died in the shame he had lived in, and his dominions were parted among his lieutenants.

A D U L T E R Y.

A Dultery discovers the breast that harbours it, to be contaminated with more vices than uncleanness. Whoever wishes to be guilty of it, must be both unjust and cruel; since his aim is to rob another of what is his sole right and property, and

and to involve him also in endless discontents for a moment's self gratification: Seneca. Adultery destroys both the peace of the husband and wife; and if their hearts have been united by love, Adultery by extinguishing that love, divides them for ever. He only who has loved, can conceive the pangs of this dreadful separation. I will venture to affirm, that life has no enjoyment equal, at least in the estimation of tender minds, to that of loving and being beloved. Fortune, honours, riches, and diversions, all are names and shadows in comparison of this inestimable felicity; and of this inestimable felicity we are deprived by adultery. For want of listening to the internal voice of nature, which inveighs against adultery, it is generally believed to be an excusable gallantry, upon the credit of wretches who have wholly extinguished all sense of honour and virtue, by habitual debauchery, and who instead of blushing at this horrid enormity, glory in the commission of it. But pirates and banditti glory also in their violence and rapine, and a grenadier becomes a ravisher without remorse in a town taken by storm: are we then to determine the turpitude of a particular crime by the opinion of the criminal? The inhabitants of Sparta were formerly so uncorrupted with the sin of adultery, that they did not so much as know what it was. For the proof of which may be alleged, the answer a Spartan, named Geradus, made to a stranger, who asked him what punishment was inflicted on those who were surpris'd in adultery; friend, said he, there is no such thing: but supposing there was, resumed the stranger, then, such an offender, replied he, would be liable to purchase a bull of so preposterous a size, that,
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mounted on his back, he might discover the mountain of Tauget in the river Eurotas. But said the other it would be impossible to find a bull of so monstrous a bigness; so would it be equally impossible, returned Geradus, smiling, to find an adulterer in Sparta: Plut. in the life of Lycurgus. Rapes, adultery, &c. we find are monstrous crimes, which crimes are, in general, the effects of intemperance. How diligently then ought people of all degrees to guard against such an abominable evil?

T Y R A N N Y.

DENIS, the younger, tyrant of Syracuse, being banished his country, retired to the city of Corinth, where he lived in a very private manner: he was one day met in the street by Diogenes, who accosted him, saying, truly Denis, thou art in a condition unworthy of thee. The tyrant stopped at these words, and replied, I am obliged to thee, that thou hast pity on my miserable fortune. On which the philosopher looked on him with a scornful smile, and resumed, thou deceivest thyself to imagine I can feel compassion for a wretch, such as thou art; no, I have rather spite, that thou diedst not as thy father did, in the cursed state of tyranny, and not live here in liberty and security, among honest people.

Democles, one of the familiars of Denis the tyrant, having said to him, that he was now arrived at perfect happiness, and that he did not think there was a wish which his soul could form beyond what he enjoyed: wilt thou, said Denis, assume my place for one day? I will lend thee my power, and cause thee to be in every thing
like

like what I am; then thou mayest be the better judge how infinite is my happiness. Democles willingly consented, and he was served, honoured, and obeyed as a King; his body was cloathed in purple, a crown of gold and diamonds adorned his head; his table was covered with meats, the most exquisite that could be purchased; the richest perfumes regaled his nostrils, and the most harmonious music his ears; but amidst all this profusion of delights, a sword hung over his head, kept from falling but by a single thread, whilst the terror of its breaking kept him from regarding either the music, the perfumes, the meats or any of those temptations to sense: he was glad to make a short dinner, and to send to intreat Denis, that he might return again to his own state; which when Denis perceived, behold now, said he, how little that can be called happiness which is attended with perpetual danger: Barton. A modern author speaks thus of persecutions: the friends of virtue are not jealous rivals, who mutually endeavour to destroy each other; on the contrary, nothing gives a man a more sensible pleasure than to see their number increase. It is from the enemies of virtue only, that injuries are to be feared; and as these injuries are inevitable evils, they ought to be expected with temper, and sustained with constancy. If we form our ideas of happiness from popular opinion, it is so far from being necessarily connected with virtue, that they are scarce ever united: wealth, titles, elevated stations, and temporal dominion, are not her inheritance. She is an orphan abandoned, unknown, destitute of friends, without a portion: her beauty, from time to time, makes a few
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conquests; but the love which is kindled by her person is commonly extinguished by her indigence: and there is yet another reason why her lovers are so few, the avenues to her dwelling are fenced up with briars and thorns, and guarded by evil genii, who keep off those that approach it; some by threatnings, others by promises; some by open force, and some by stratagem and cunning. There is, however, one circumstance which ought to encourage the lovers of virtue and teach them perseverance, they are secure of conquest if their passion is sincere. To love virtue is to possess her; she escapes from those alone who betray her by inconstancy or weakness: and by those who love her, she can never be betrayed. Nor are there any who become unfaithful to virtue, but through a fond attachment to some fallacious good, which she either with-holds or takes away, such as indolence, ease, the pomp of life, and the favour of the great. But to prefer to virtue, or even to put in competition with her, any temporal advantage, the mitre, the tiara, or the regal diadem itself is more than not to love her, it is not to know her. To put air and smoke, and tinsel in competition with virtue: what an injury? what an insult? But to give these the preference, what a horrid profanation? The vicious, who are the majority, are the governing part of the world, have never dared publicly to stigmatize virtue, nor do they oppose her under that name. To justify their prosecutions, they give her odious appellations, pretend not to know her, and canonize vice disguised in her ornaments and apparel. They call integrity and fair dealing, puerile simplicity; the forgiveness of injuries, cowardice; prudent

prudent circumspection, pedantic gravity; the contempt of gold, folly; and generosity, weakness. Ambition, on the contrary, is, in their language, transformed into noble emulation; cunning and fraud are industry and address; bigotted hypocrisy takes the name of piety; knavish chicanery, that of refined policy; false pretences, subtle evasions, and dissimulation, are master-pieces of prudence; transports of passion are vivacity; pride, dignity of sentiment; thirst of revenge, an indispensable point of honour; and ferocity, courage. The encomiums of these wretches are insults; endeavour, therefore, to render yourself unworthy of them. Their favours are poisoned; be careful not to merit them, for they cannot be obtained, but at the expence of virtue. When we are deliberating on an enterprize which we may either attempt or relinquish, as shall appear most eligible, it is not only allowable but necessary to weigh all the disadvantageous circumstances which may attend the execution: but we must not suppose there are any such circumstances, when the work before us is a duty: a soldier is commanded to mount the breach; it is not his business to examine the risque he runs, but to march forward without deliberation, although his death appears to be inevitable; for the word of command is not conditional. In the same manner let us march under the standard of virtue, without reflecting on the danger to which we may be exposed, which, if it is an evil, ought to be considered as inevitable, because it cannot be shunned but by breach of faith, and to be weary of suffering for virtue is to make great approaches to vice. Is your reputation sullied by invidious

calumnies? Rejoice that your character cannot suffer by the false imputations you are arraigned for in a court of judicature, and are unjustly condemned; passion has influenced both your prosecutor and your judge, and you cannot forbear repining that you suffer although innocent. But would it have been better that you should have suffered being guilty? Would the greatest misfortune that can befall a virtuous man be to you a consolation? Or would your suffering be alleviated by the addition of remorse? The opulence of a villain, the elevated station to which he is raised and the honours that are paid to him excite your jealousy, and fill your bosom with repinings and regret. What say you, are riches, dignity, and power reserved for such wretches as these? Cease these groundless murmurs. If the possessions which you regret are real benefits, they would be taken from the wicked and transferred to you. What would you say of a successful hero, of a Vendome or a Maurice, who after having delivered his country shall complain that his services were ill requited, because a few sugar plums were distributed to some children in his presence, of which they had not offered him a share. Ridiculous as this would appear your complaints are not better founded. "Has the Lord of all
 "no reward to confer upon you but perishable
 "riches and empty precarious honour." Intemperance may justly be styled the first cause of tyranny and persecutions as well as of other evils.

W A R.

WAR brings with it an infinite number of misfortunes: extortion and injustice are its fore-runners, and cruelty and violence are its companions.

All sorts of disorders are introduced by it; poverty and wretchedness are its consequences, and those who delight most in it grow often weary of it, but find it much more easy to begin than to end it. "In time of war," says Pliny, "justice and humanity are set aside, and rapine reigns; luxury is set at liberty, the most impious are in authority, the virtuous are oppressed, innocence is destroyed, virgins and matrons are violated, countries laid waste, houses burned, temples demolished, sepulchres of the dead erased; all manner of crimes are committed with impunity, murders, parricides, rapes, incest, sacrilege, are regarded but as common actions; all laws both human and divine are trampled on, and man seems to be governed by no other precept than his own voracious and unbounded will." Phocion, that great general of the Athenians, did all he could to hinder them from declaring war against the Macedonians; and when some, who dissented from him in opinion, asked him when he would have them make war; when the young men, he said, shall become grave and deliberate, when the rich shall voluntarily contribute to relieve the necessities of the poor, and when the orators shall refrain speaking in public: these being all things he believed not likely to come to pass. Plut. in

his life. The Emperor Augustus said, that to render war a benefit, it ought to be commanded by the Gods, and justified by the philosophers.

Ælius Spartanus said, that Trajan was the only Roman monarch who had never been defeated; the reason of which was, that he never undertook a war without a justifiable cause.

D U E L L I N G.

SCIPIO Africanus and Metellus were known to be men of the greatest courage, yet would they never fight in a single combat; saying, it became a general to die as a general, and not as a private man. Theophrastus maintained, that he who lost his life in a duel, robbed his country of what he had no right to dispose of. Plut. in the life of Sertorius. Mark Anthony, having challenged Augustus Cæsar, received for answer, that his life was of too much consequence to his subjects to hazard it ingloriously. Plut. in the life of Anthony. The Greeks and Romans, who were, by turns, the conquerors and the legislators of the world, certainly well knew what was valour; but did they make murder a sport, and wantonly destroy each other? They hung up the sword, the bow, and the shield, as instruments wholly useless in time of peace.

P R I D E.

P R I D E is the detestation of God and man, and is of itself sufficient to turn the best things into wickedness. Dioclesian, the Emperor, made himself be called the brother of the sun and moon; but

but was afterwards ashamed of his presumption, and became the humblest of mankind. Menacrates, perceiving Philip of Macedon to be falling into this vice, made him see his error by a pleasant stratagem; he invited him and his whole court to a feast, where were several tables for the nobility, all covered with the most excellent viands; but that for the King was served only with incense, which he asked the meaning of. If thou art a God said Menacrates, as thou thinkest thyself, this is the only food thou canst be treated with. These words this excellent Prince was so far from being offended at, that he ever after looked on the speaker of them, as his best friend; and from that moment threw off all pride and vain-glory: Ælian. The pride of this world is generally turned into contempt: those who, for some time, are idolized, are in the end derided. Even Alexander the Great, though worshiped as a God while living, was denied human rights when dead, his body lying unburied for thirty days: Ælian. Demosthenes observes that nothing obscures the lustre of good actions so much as pride, nor renders ill ones so notorious.

R E V E N G E.

TO take vengeance for an injury, says an ancient, is robbing Heaven of its prerogative; and, as all created beings are under the direction of one Providence, to that alone we must trust. If I revenge myself, said Cato, the Gods will punish me, because injuries done to me are directed by them, in the violation of their laws, and to them it belongs to assert their power, and vindicate their creature.

creature. The naturalists remark that a lion never falls on any creature whom he finds incapable of resistance; he seems to think it beneath him to encounter one who is weak. How much less then ought man to make use of that power, which chance or superior strength may give him, to the hurt of one of his own species. 'Tis observable, to the great disgrace of humanity, that man is the only creature who wants pity for those of his own species. Bears, wolves, tigers, dogs, and even cats, will courageously defend each other when assaulted, and lose their very lives in vindication of their own kind: man fights with man, and for hire combats his own likeness.

I N G R A T I T U D E.

AMONG the many excellent laws which Draco established in Athens, the punishment of ingratitude was with death. Alexander the Great, was the most liberal Prince in his time, Julius Cæsar the most forgiving; yet would one never give any thing to an ungrateful person, nor the other pardon him if at any time found guilty. Pyrrhus regretted beyond measure the death of one who had been his faithful friend; not, said he, but I have philosophy enough to enable me to support the news of what is common to all, who are of human nature; but I am grieved to the soul to think I have no longer the power of relating the good office I have received from him. The same Pyrrhus being advertised by the Romans of some treason practised against him; as a gratification for that intelligence, returned them a great number of prisoners without ransom. Plut. in his life.

life. Cicericus, who had been secretary to the great Scipio, finding the son of that deceased hero, to be competitor with him for the prætorship, was so fearful of appearing ungrateful to the memory of him, to whom he was so much obliged, that he plucked off the white robe, worn by those who claim the magistracy, and became a solicitor for the young Scipio. An Arabian by birth, and by religion a Turk, had yet as much gratitude, that being general of the infidels against Podowin, King of Jerusalem, and having entirely defeated him at a pitched battle, remembered that Prince had formerly treated handsomely, and sent home his wife, when a captive; and therefore went in the night to a little city, where he heard he was fled in private, and conducted him to a place where he might be in security, knowing the Turks had a design to go thither and murder him.

None had a greater sense of gratitude than the old Romans; they erected a statue to Horatius Cocles for defending the bridge; they gave an inheritance of great value to Mutius Scævola for having decamped Porcenas, when he besieged their city; they built a temple to the honour of those women who had appeased the fury of Coriolanus; and in fine they left no memorable action unrewarded.

Q U A R R E L S.

PRIVATE quarrels are as shameful as public ones, are dangerous to a common wealth; and if it be dishonourable to be accounted a coward, it is no less so, in the opinion of the truly brave and wise, to be too ready to draw the sword

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on every trifling occasion. None can be too forward in vindicating the honour of religion or their country; none too backward when neither of these are concerned. Demaratus observes that there are a sort of people who take delight in quarrels; and these he says are, of all fools, the most contemptible, and beneath the notice of a man of honour; from such it is better to bear an affront than resent it.

G A M I N G.

CHILON being sent from the Lacedemonians to Corinth, to treat of an alliance between the two nations, found the Governors playing at dice; upon which he returned without delivering his message, saying it would be very inglorious for the Spartans to hold society with gamesters: Plut. in his notable sayings. It was the opinion of the ancients, that nothing discovered an avaricious mind more than the love of gaming; and that eagerness with which the moderns engage in it, the transports they are in at a lucky hit, and the discontents ensuing upon a contrary one, prove, but too evidently, that assertion to be just. Seneca maintains, that nothing is more impolitic than public gaming; and that with reason, for could a statesman see himself in those antick gestures, which his good or ill fortune at play puts him in, or a fine lady the distortion of those features, she has perhaps all the morning been endeavouring in her glass to compose; the one would tremble at the little regard that would hereafter be paid to his counsels, and the other for the loss of her conquests, and reputation of beauty.

INJUSTICE.

I N J U S T I C E.

THERE is nothing more grievous to good men than to see villany supported; and nothing more emboldens the wicked than the belief that they may persist with impunity. Demetrius having received many petitions from his subjects, threw them into the water, as he passed over the bridge of a certain river, which made the people conceive so implacable a hatred to him, that his whole army forsook him; and, going over to Pyrrhus, chased him from his dominions, without the least skirmish or blood shed.

J U S T I C E.

THE Emperor Aurelian was so fearful of bringing any person into the judicature, who should be unworthy of it, that he would never give the dignity of senator to any, without the approbation of the whole senate. Trajan being on horseback at the head of his army, ready to begin their march, jumped off and stood a considerable time on foot, to listen to the complaints of a poor woman. A poor woman addressed herself to Philip of Macedon; he told her he had not leisure to hear her; on which she cried out, with a loud voice, why then hast thou leisure to be a King? These words gave him so lively an idea of the duties of that state, that he immediately returned to his palace, and gave several days to hearing the complaints of the meanest of his subjects; beginning first with the poor woman: Plut. in the continuation of his
life.

life. The Emperor Trajan, having made choice of a man of great probity for general of his army, he presented him with a rich sword, saying to him, at the same time, I charge thee to employ this in my service, while I am Emperor; that is while I do the duties of one, and when I fail in them to turn the point upon me: Dion. in the life of Trajan. Cleon, the Lacedemonian, being chose judge of civil affairs, sent for all those with whom he had contracted any friendship, telling them he must now renounce all intimacy with them; for particular friendship bias'd the mind, and left it not the liberty to execute justice: Plut. in his treatise of instructions to those who manage public affairs. Harpagus entreated Philip of Macedon that his father, being convicted of great crimes, might pay the penalty, which the law inflicted, in private, and be spared the shame of a public sentence; but Philip told him it was better for him who committed the faults to bear the dishonour of them, than that the King should bear it for him. The Romans, whilst they continued temperate, were the most strictly just of any people in the world. Brutus put to death his two sons for having transgressed the laws, to shew he regarded only the merits of those he judged: Plut. in the life of Publicola.

F A I T H.

THE great and illustrious persons of antiquity thought no virtue more commendable than a strict observance of their word; they looked on it as the first foundation of justice, the bond of amity and the chief support of society. There is
nothing

nothing in which a wise man is more distinguished from a fool than by his promises. The indiscreet make them lightly, and as often as they are demanded; the man of judgment consults within himself, before he enters into any engagement. The one forgets immediately what he has said; the other, having once made you depend upon him, will never revolt, what loss or detriment soever it may happen to be to him. Attilius Regulus, a noble Roman, being taken prisoner in the Carthaginian war, and sent to Rome on his word of honour to return, in order to treat of peace, and the exchange of prisoners, being arrived, he told the senate that it was not for the interest of the republic to accord to the demands of the Carthaginians; which being reported at his return, he was put to a cruel death, tho' no more than he expected, and made choice of that rather than break the faith given to them, by not restoring them their prisoner: Cicero.

F O R T I T U D E.

DEATH which terrifies the boldest, made not Seneca the philosopher change countenance; he beheld, with steadfast eye, his blood and life gush out together; and neither endeavoured to move the pity of the tyrant nor exclaimed against his cruelty. Alcibiades heard the sentence of his death pronounced, without appearing the least shocked at it. 'Tis I, said he, who leave the Athenians condemned to death; not they who have passed that doom on me. When I forsake this world, continued he, I go to find the Gods, with whom I shall live to all eternity; they stay
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among men, subject to death. Cræsus, King of Lydia, being deprived of his estates, and prisoner to Cyrus, made known his virtue and fortitude more than ever he could have done in an uninterrupted course of prosperity; and for this it was that Solon thought him most happy. When he was condemned to death, by the rage of his conqueror, he remembered the discourse he had heard from the mouth of Solon, concerning the little dependance there was on human felicity, and adding to it, that no man ought to be termed happy, until the last of his life had proved him so; he cried out three times, at the place intended for execution, oh Solon! Solon! Solon! great is thy wisdom; which reaching the ears of Cyrus, he ordered he should be brought before him, and then asked the occasion of his calling on Solon. This demand obliged Cræsus to repeat the advantages he had received from the advice of that philosopher; which had so great an effect on the generous disposition of Cyrus, that the hate he had born his prisoner was now converted into admiration; he restored him to his liberty and throne, and held him ever after as the dearest of his friends: Herodotus. Publius Rutilius, being unjustly banished, never changed his countenance nor his manner of living, nor ever solicited the Senate to recal him; but passed the remainder of his days with the same grandeur and chearfulness as before, shewing himself not in the least troubled nor enraged at the alteration of his condition. Val. Max.

V I C E.

AS virtue, says Plato, is the health of a strong and vigorous mind, so vice is the disease of a weak and imperfect one; and 'tis the habitude which renders either of a piece with the soul, and becomes a kind of second nature. Chrysippus, a stoick philosopher, calls vice the essence of unhappiness; the guilty are ever anxious, fearful and full of perturbations; remorse, and a too late repentance, gnaw perpetually on the soul, distract the brain, and bring on horrors nameless, numberless, and eternal.

Bias says, that the man who is a slave to vice labours under the worst captivity; because bodily chains may be broken, but those of the mind are not worn off, but with the most terrible efforts; and even then, too frequently leave marks behind, which are never to be erased. According to Demosthenes, a man cannot justly be called vicious because he has been guilty of some faults, nor a man free from vice because he has escaped them. Circumstances make a vast alteration in the very facts themselves; and a mind, the most free from corruption, may, thro' inadvertency or the prevalence of temptation, fall into those very errors it naturally most abhors.

V I R T U E.

CICERO says virtue is the foundation of amity, it both gains and secures the hearts of men, L. i. Nat. Deor. Socrates maintains, that the highest virtue is the hate of voluptuousness, which he

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calls the mother of all other vices. 'Twas for this reason, that the Athenians made all their feasts by night, as being ashamed the sun should be witness of their follies. That is true which enables us to resist the temptation of the most enchanting pleasures, when we would give our very lives for the enjoyment of any thing which our desires are set on, yet refrain it when in our power, merely because it is an offence to virtue. Seneca maintains that the victory we get over our passions is the most difficult, and therefore the most noble of any. It is observable, that the Romans never triumphed over others till they had learned how to triumph over themselves.

M A G N A N I M I T Y.

THE Numantians having been besieged by the Romans for fourteen years, and at last so environed by the forces of Scipio, that they had no possibility of receiving relief, thought of nothing but to die with the same honour they had lived. That noble Roman, perceiving the magnanimity of those people, offered them terms, which might have been accepted by souls less tenacious of their liberty; but, instead of returning an answer of compliance, they sent him word, that as they had, for the space of three hundred and thirty-eight years, been exempted from tribute, nor acknowledged any other nation as superior to them, they would at last die free and masters of themselves. They had no sooner dispatched the Roman herald with this message, than after having taken a solemn leave of each other, and recommended their souls to the mercy of Heaven, each man took a torch and set fire to his
own

own dwelling, and consumed himself and all he had, leaving Scipio neither treasure to plunder, nor man nor woman to triumph over; which occasioned him, bewailing their destruction, to say happy, happy Numantia, which the gods intended to put an end to, but never would permit to be overcome. Fabricius, Consul of Rome, discovered a noble magnanimity of soul, in his behaviour to King Pyrrhus; for, being offered by the physician of that Monarch to put an end to their war by poisoning his master, he sent immediately to acquaint him with it, telling him he made as ill a choice of his friends as enemies; for he made war on men who were naturally brave and generous; and put confidence in those who were wicked and disloyal. I let you know the intended treason, said he, in his letter, not to court your friendship, but to clear the Romans from all imputation of encouraging it; 'tis by our own virtue, and not by the faults of others, that we wish to conquer.

Nothing could be more praise-worthy than the conduct of Camillus, a Roman dictator, who having laid close siege to the city of Phaleria; a certain preceptor, who had the greatest part of the children of the nobility under his care, went and delivered them all into the hands of the Roman general; telling him the Phalerians would consent to any terms, rather than suffer those dear hostages to be ill treated; but Camillus disdained the treachery, ordered the wicked preceptor to be stript naked; and, with his hands tied behind him, sent into the town, giving a lash into the hand of every one of his pupils, to whip him as he went. This generous action had such an effect on the

citizens, that they immediately submitted themselves, confessing that the Roman virtue merited to command the world: Plut. in his life. Now by the foregoing examples of the ancient heathens, who walked in darkness, being destitute of the knowledge both of the old law and the gospel, we may learn that, even in their days, temperance and virtue walked hand in hand; and that intemperance and vice were the inseparable companions of each other. Is it not strange then, that the heathen Romans should, for so many ages, delight and glory in the practice of temperance; and that we, on the contrary, should delight and greatly glory in intemperance of all kinds; when we have the most dreadful woes denounced by God himself against the intemperate? a temperate man, who alone retains the right use of his reason, is shocked at the growing power of this hideous monster, this mother of vice; and which, as I have said before, is the cause of almost every evil. But a man who is already under its dominion is bewildered, the vigour of his soul is impaired and itself abased; all his reflections are weak, and, if he sees himself going in a wrong path, he has now no resolution sufficient to make a retreat. How pitiable a state is this, and yet how true? There is a certain neighbouring idolatrous nation, under the influence of the western antichrist, which hath been labouring with all her art to undo this island, for upwards of a century; and her method of introducing luxury and effeminacy hath weakened us not a little; of which she is well apprized, and now being in general effeminate and, as one may say, weak in judgment, we run eagerly amongst them, to fetch home any ridiculous fashion or custom

tom they please to shew us; and, when once it is arrived, it soon reaches every corner of the land: the nation I am speaking of is under what some please to call tyrannical government. Now tyranny is prohibited from being imported hither, for very substantial reasons; but then so many of our weak brethren are making long stays there, who have their bodies so relaxed, and consequently, their pores so open, that they have imbibed the infection and smuggled it, in spite of the strictest search. It is a kind of plague, and is mostly used by those whom the world please to call the great, to punish their inferiors. If one were to judge from appearances, one might imagine that there are some so weak, in the above class, as to wish government to employ it; but all wise governments know better. Do but read the Old Testament, and there you may find what is to be the portion of Princes, who use such a scourge; if even the people deserve chastisement from the hand of providence. Bad fashions are never encouraged by any but intemperate people, of weak understandings; and they are of this sort, who are proud, ambitious, avaricious, &c. There are a number of labouring people, many of whom come the nearest temperance of any rank upon the island; especially those who labour without doors; now had these people only a sufficiency to support themselves and families, scarce any other rank upon the island would be more happy. Tradesmen and manufacturers have always been said to be the support of the nation; but alas, whither are that useful set of people now wandering; or I may say, what a wretched condition is this country now driven into, through the horrid effects of intem-

perance of all kinds, and the above named causes. There is now no other means left, to save this sinking state from general ruin and general disease but the substituting temperance instead of intemperance; and it may be depended on, that, as temperance gains ground, its companion, virtue, will again shine forth; and the more temperate we become, the more beautiful and attracting will *her* splendour be. When temperance is once established, humanity will cause the murmurings and repinings of the poor to cease; and unity and concord will, in a great measure, abound. But some will say that they are the drunkards, the dissolute, intemperate, &c. who raise a large part of the revenue; and others may say we have lived in good repute, and kept ourselves in a genteel way of life, by supplying such people with what they wanted; and, if temperance be encouraged, what shall we do? I may, for the present, say, were the people once reformed, their constitutions would become vigorous, the eyes of their understanding enlightened, and trade would become much more extensive, and greatly increased; there would likewise be a great increase of people (which are the riches of every trading nation) and plenty of all the necessaries of life, within the reach of the lowest mechanic; and the revenue might, without the least doubt, be increased, far beyond any thing we have hitherto seen, without being burthensome to any one. As to those who have lived by the intemperate, let them not doubt but that a reformation will be to their final comfort. There is a numerous class of intemperate people, who deserve the most severe reprehension; I

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mean those who have wives and children to support, but instead thereof, wantonly spend one-third or one half, nay some of them three-fourths of their wages, and have wives and children half starved. Those men are the real scum of the earth. How are those wretches lost in intemperance? Are they not sunk far below the brute creation? Such men are not only destroying themselves, but likewise every other thing which ought to have been the most dear to them. Behold a senseless brute, in the midst of his debauch, wallowing in his own dirt. See him belching out, alternately, oaths, and the drench he has but now swallowed; view his doleful habitation, and observe the scene of distress here, a set of meager, sickly, dirty, ragged children, crying for bread; and there the mother standing, trembling and crying, in the very anguish of her soul (her countenance bespeaks it) having neither bread in the house, nor credit without doors, nor dares she approach the ungrateful monster and tyrant of the family, her husband, either to solicit his return home, or ask for money to purchase bread with; there being a custom among jovial companions which forbids the approach of their wives at such times. It is from such unreasonable and contemptible trash as these that the community suffers most severely, notwithstanding they may somewhat increase the revenue. They who are thus far advanced in vice are too often ripe for almost all manner of crimes; and I know of scarce any one set of men, in low circumstances, more hurtful to the well being of mankind, except those unreflecting and stupid people who do still insist upon voting for men who will give the most money, or

fairest

fairest promises, without so much as ever endeavouring to learn whether such men are virtuous, or whether they be seriously inclined for the general good of the state. It is this intemperate and consequently unreflecting and short sighted class of people which threatens to be the greatest scourge of the state. And their crimes can only be obliterated by a reformation and sincere repentance; but no sincere repentance can be made by any mortal for any one crime whilst he continues intemperate. To give the young Lacedæmonians a relish for sobriety, slaves were exposed before them who had been made drunk on purpose; and this spectacle, which exhibited a faithful and striking picture of the infamous brutality, which is the effect of drunkenness, made a deep and lasting impression upon their minds. We are not reduced to the necessity of having recourse to this expedient; we have no need to make our servants drink, to give lessons of temperance to our children; many of our countrymen, of all ranks, very willingly take upon themselves to perform the office of the slaves of Sparta; and some perhaps, who have preached against intemperance in the morning, will generously illustrate their doctrine at night, by exhibiting in person an instance of the absurdity and brutality, which are the effects of the vice against which they have declaimed.

If nothing were necessary to inculcate temperance but the practice of the contrary vice, we should not want precepts. Dr Buchan very justly represents the fatal consequences of intoxicating liquors as follow: "Every act of intoxication puts nature to the expence of a fever,
 " in

" in order to discharge the superfluous load;
 " but, when that is repeated almost every day,
 " it is very easy to foresee the consequences. That
 " constitution must be strong indeed, which is
 " able long to hold out under a daily fever:
 " but fevers occasioned by drinking do not al-
 " ways go off in a day; they frequently end in
 " an inflammation of the breast, liver or brain,
 " and produce fatal effects. Tho' the drunkard
 " should not fall by an acute disease, he seldom
 " escapes those of a chronic nature. Intoxicating
 " liquors, when used to excess, weaken the bowels
 " and spoil the digestion; they destroy the power
 " of the nerves and occasion paralytic and con-
 " vulsive disorders; they heat and inflame the
 " blood, destroy its balsamic quality, render it
 " unfit for circulation, and the nourishment of
 " the parts, &c. Hence obstructions, atrophies,
 " dropsies, and consumptions of the lungs. These
 " are the common ways in which drunkards
 " make their exit. Diseases of this kind, when
 " brought on by hard drinking, seldom admit
 " of a cure. Many people injure their health by
 " drinking who seldom get drunk. The con-
 " tinual habit of soaking, as it is called, though
 " its effects be not so violent, is no less perni-
 " cious. When the vessels are kept continually
 " full and upon the stretch, the different di-
 " gestions can neither be duly performed nor
 " the humours properly prepared. Hence most
 " people of this character are afflicted with the
 " gout, the gravel, ulcerous sores in the legs,
 " &c. If these disorders do not appear, they
 " are seized with low spirits, hypochondrical
 " disorders and other symptoms of indigestion.
 " All

“ All intoxicating liquors may be considered as
 “ poisons; however disguised, that is their real
 “ character, and sooner or later they will have
 “ their effect. Consumptions are now so com-
 “ mon, that it is thought one-tenth of the in-
 “ habitants of great towns die of that disease.
 “ Drunkenness is one of the causes to which we
 “ must impute the increase of consumptions.
 “ The great quantities of viscid malt-liquor;
 “ drank by the common people of England,
 “ cannot fail to render the blood fizy and unfit
 “ for circulation; from whence proceed obstruc-
 “ tions and inflammations of the lungs. There
 “ are few great ale drinkers who are not phthisi-
 “ cal, nor is this to be wondred at, considering
 “ the glutinous and almost indigestible nature
 “ of strong ale. Those who drink ardent spirits
 “ or strong wines do not run less hazard; these
 “ liquors heat and inflame the blood, and tear
 “ the tender vessels of the lungs in pieces. No
 “ man is so dejected as the drunkard, when his
 “ debauch is gone off; hence it is, that those
 “ who have the greatest flow of spirits, while
 “ the glass circulates freely, are of all others the
 “ most melancholy when sober; and often put
 “ an end to their own miserable existence in a
 “ fit of spleen or ill humour. Drunkenness not
 “ only proves destructive to health, but likewise
 “ to the faculties of the mind. It is strange,
 “ that creatures who value themselves, on ac-
 “ count of a superior degree of reason to that
 “ of the brutes, should take pleasure in sinking
 “ so far below them. Were such as voluntarily
 “ deprive themselves of the use of reason to
 “ continue ever after in that condition, it would
 “ seem

" seem but a just punishment. Though that be
 " not the consequence of one act of drunkenness,
 " it seldom fails to succeed a course of intoxica-
 " tion. By a habit of drinking, the greatest
 " genius is often reduced to a mere dunce."

Health is that constitution of the body in which
 the breath of life that animates it acts with the
 greatest energy. To impair health is to diminish
 life; a man is less and less alive in proportion
 as his health declines, and when it is totally
 destroyed he dies. The same law which restrains
 us from putting an end to our own lives, forbids
 us also voluntarily to destroy our health. From
 these principles it follows, that voluntarily to
 destroy health, in what ever manner, is to
 infringe the law of nature, which enjoins its pre-
 servation. Sobriety therefore, like all other vir-
 tues, is the mean between two opposite extremes.
 To destroy the constitution by excessive absti-
 nence is not a less culpable excess, than to shorten
 life by intemperate eating and drinking, &c. Is
 he who takes a slow poison less a self murderer than
 a more resolute wretch who stabs himself? As
 this criminal is condemned without hesitation,
 why should the other be acquitted? If it be dis-
 puted whether suicide be contrary to the law
 of nature, it will not be difficult to prove it.
 This law does not require us to treat other per-
 sons better than we treat ourselves; and it is
 generally agreed, that we are forbidden to take
 away the life of others, at least by our own pri-
 vate authority, much less therefore are we al-
 lowed to take away our own. We continue
 to live doubtless only because it is the will of
 God we should not yet die, and God wills no-
 thing

thing with respect to us, which has not a direct tendency to our happiness, this being the ultimate end of our creation; to become our own murderers, therefore, is to counterwork his purpose, and not only to neglect, but to renounce the felicity which he intended us. What but intemperance, or what is the same thing, an improper use of the non-naturals, hath been the hideous and calamitous cause of so many horrid and detestable modern wars in Europe.

Augustus and Trajan, monarchs of immortal glory, were strictly temperate, and by that means retained their reason; therefore they made it their greatest pleasure to comply and save mankind. But Tiberius, Sylla, Caligula, and Nero were intemperate, and therefore weak-headed; consequently they were proud, ambitious, avaricious, &c. It was therefore the greatest pleasure of these four monsters to command and destroy, which hath brought an everlasting odium on their names in this world; but that is not the worst consequence to them; notwithstanding they were heathens, they had the law of nature to walk by, which they with the greatest brutality infringed, perpetrating with pleasure the most barbarous crimes, upon the bodies of thousands of their fellow creatures. I want words to express the abhorrence which all reasonable men must have of the modern wars amongst the christians; especially when one reflects that they have, in general, been promoted by those very men who pretend to be the supreme head of the christian church. Could any thing but inactivity or other kinds of intemperance have brought men of learning to such a stupendous and enormous
degree

degree of barbarity and flagitious hypocrisy. It may be here observed, that when once intemperance hath gained on a mortal, the flesh is no longer subservient to the will of the spirit; hence there is a degree of weakness, and of consequence an easy prey is left for Lucifer; and where he can do the greatest ills, there does he work with the greatest vigilance; that is, amongst heads of nations, and their intemperate flatterers. I repeat it again, that is, amongst heads of nations, and their intemperate flatterers. And it appears his greatest delight is in horrid scenes of war, and untimely deaths. Our ablest expositors of the ancient great Prophets, who spoke by the mouth of God, and the revelations of St John the Divine, &c. make no doubt but that Rome is the great beast with seven heads and ten horns; they likewise make Rome to be the seat of the western antichrist, and Constantinople that of the eastern; and the ten horns with crowns on them so many idolatrous nations under the influence of the western antichrist; and what abominable uses those horns have been put to, is but too well known. Hath not the western antichrist been pushing with them, and with diabolical fury goreing the best of Christians in order to root out christianity from off the face of the earth, and thereby introduce his wretched idolatry and wonderful methods of acquiring worldly wealth, such as gold, silver, &c? What have they done with the second commandment? Hath not Lucifer himself prompted them to conceal it from their deluded flock, a flock mocked by those who pretend to be their pastors? Do they not speak to them in the church in an unknown tongue? What a high de-

gree of iniquity and folly is this? And was there ever known upon earth a more detestable and horrid device than making inquisition for innocent blood, which they procure to stream forth? A volume would scarce be sufficient to contain half the superstitious and unparalleled absurd idolatrous doctrines introduced into Christ's once glorious Church, by these notorious hypocrites, who have pretended to use their best endeavours to keep it in its greatest purity. O intemperance how hast thou debilitated man! thou, even thou hast impowered Lucifer to transform those who should have been the best of men, into the most tyrannical monsters. Monsters, who have most wantonly violated the very laws of nature. The consequence of which hath been perhaps no less than the discouraging and hindering the Jews, the Mahometans, and others, still in darkness from embracing the glorious gospel of Christ long ago, I say long ago; but how should they, whilst they have beheld with contempt the most glaring profanations of the great Creator's name, in the very act of worship? However we have it from undoubted authorities, that the Jews and also the Gentiles will, sooner or later, embrace the gospel of Christ; and, as no mortal hath been able to account for the time, who knows but it may be near at hand? See Isaiah, chap. xi. and chap. lxv. Jeremiah, chap. xvi. from ver. 14, to the end; Jeremiah, chap. xxiii. see also the Revelations of St John the Divine; but there are many other parts of the Holy Scripture which might be referred to, and which foretel the conversion of the Jews and Gentile world. Sir Isaac Newton tells us, " The preservation of the Jews through so many ages, " and

“ and the total destruction of their enemies are
 “ wonderful events; and are made still more won-
 “ derful, by being signified before hand by the
 “ spirit of prophecy. The preservation of the
 “ Jews is really one of the most signal acts of
 “ divine providence; they are dispersed among all
 “ nations, and yet they are not confounded with
 “ any, but distinct—nor is the providence of God
 “ less remarkable in the destruction of their ene-
 “ mies, and the oppressors of the jewish nation.
 “ The Egyptians, the Syrians, the Babylonians, the
 “ Syro Macedonians, especially Antiochus, Epi-
 “ phanes and the Romans, with several others.”

And where are now these great monarchies?
 Are they not vanished as a dream, &c. &c. &c.
 The christians and the jews would do well in
 seriously reflecting upon this. And well it would
 become the christians to banish intemperance
 and idolatry from amongst them; that they may
 no longer become a stumbling block to the
 jews and the rest of the gentile world; but in-
 stead thereof, faithful and illustrious guides to
 lead them from darkness to light, and from the
 error of their ways into Christ's church. Would
 christians only make trial of temperance for a
 while, they might with a good conscience be
 able to pronounce it the real fountain of virtue;
 and of consequence a thing more to be desired
 than any other worldly good; as it would guide
 them into the true path which leads to eter-
 nal happiness. Whoever is anxious after real
 pleasure in this life, let him by all means ob-
 serve a strict temperance; which if he doth,
 he may acquire it, and with delight contem-
 plate and meditate upon the many wonderful

and beautiful works of the great Creator. He may then with just exalted raptures observe the stupendous wisdom and goodness of the great Jehovah, illustrated in every visible part of the creation; and with heart-felt joy, extol and praise his gracious name: he would then, and not till then, have a just sense of the egregious follies of the intemperate, and look down upon them with an eye of pity; would commiserate their truly deplorable condition, and in compassion to them would, if he conceived there was a probability to reform them, use his utmost endeavour. We are told from holy scripture, that God doth not afflict willingly, nor grieve the children of men. To what then must we attribute the wretched consequences of the late and present wars, and many other grievous evils, which a great majority of the people in Europe now labour under? To what else but intemperance, a most hateful spring, from whence issues a rapid and sweeping torrent of black and deadly corruption, leveling in its course tens of thousands of the sons of Adam, even below the brutal creation. I have already observed that Lucifer works with the greatest vigilance, where he can do the greatest ills, which is amongst heads of nations and their intemperate flatterers; and that it appears his greatest delight is in horrid scenes of war and untimely deaths, &c And have not discerning men seen with remorse, for above half a century past, that two or three intemperate and weak heads at a time, under the guidance of an evil spirit, have been able upon the feeblest pretences to make Europe the bloody theatre of war, time after time? What a deep disgrace hath intemperance
then

then brought upon religion? The Europeans still profess destruction and inevitable ruin; instead of love, harmony, and union. Horrible war with her bloody banners is now making dreadful devastation and ravages in the East; and mighty preparations, for hostile blood have long been forming in the center, the south, the west, and the north; such as huge ships, with swarms of men, many of which are too often compelled by force to abandon their helpless families, or aged and indigent parents; these ships too are sufficiently provided with ugly and unweildy instruments of death, such as heavy tubes of iron, solid and hollow globes of the same metal, to be put in furious motion, by a stinking composition, (said to be the invention of a priest) in order to dash in pieces, blow up, burn, sink, or otherwise destroy the noblest work of the beautiful creation; and the greater the destruction, whether by sea or land, the more pleasing to Lucifer, there being the more plunder for him; also the more pleasing to these most wretched and chief tools of his, (I mean the secret promoters of these unhumane and barbarous wars) provided the greatest havock be made on the side they have procured to be their enemies. O what horrid monsters are produced from the deadly spring of intemperance? To what purpose are these bloody wars? It seems the Omnipotent Being is most justly offended at the numberless and grievous sins, which now flow from intemperance, and therefore doth not at present restrain the power of Lucifer; but then if men would become temperate, they would see clearly into their past follies, be greatly ashamed, and become also truly penitent, shewing forth, with-

out diffimulation, a most serious repentance. A great change, therefore from intemperance to temperance is become highly necessary, it being the only possible means now left us, whereby we can expect to intercede with the Father of Mercies, to restrain and bind Satan. I repeat it, it being the only possible means now left us, whereby we can expect to intercede with the Father of Mercies to restrain and bind Satan. See what St John saith in the 20th chapter of his divine Revelations, verses the 1st, 2d, and 3d; “ And I saw an Angel come down from Heaven, “ having the keys of the bottomless pit, and a “ great chain in his hand; and he laid hold on “ the dragon, that old serpent which is the Devil “ and Satan, and bound him a thousand years, “ and cast him into the bottomless pit, and shut “ him up and set a seal upon him, that he should “ deceive the nations no more till the thousand “ years should be fulfilled and after that he must “ be loosed a little season.” Hence it is very plain from this passage of St John, that the Devil is now actually deceiving the nations. It appears also very plain from many other parts of the holy Scripture; but alas! how few are there, that lay these things seriously to heart; I say how few in comparison of the multitudes now wallowing and groveling in the very depths of intemperance, and committing, with a seeming pleasure, almost every sort of crimes which Lucifer can possibly set them about, mean time they exhibit a most striking view of their ingratitude to God their maker; and are heaping upon their own heads a heavy weight of his most just indignation, and in vain may they hope to have it lightened whilst they continue in-temperate,

temperate, it being contrary to the wise order of things: For God is truth and cannot falsify himself. Europe was once accounted the enlightened quarter of the world, but now dark, diabolical and dismal clouds of hateful tyranny have eclipsed it. We are told from Holy Scripture, as I have before observed, that God doth not afflict willingly, nor grieve the children of men. And if woe hath been denounced on the drunkards of Ephraim, what will be the portion of leading tyrants, or even the lowest class of them? Tyranny, as I have before observed, is now in fashion; and we have tyrants interspersed throughout Europe, of several denominations, from high to low degrees, even down to the steward of a man of middle estate. Tyrants and oppressors, of whatever denomination, are most justly looked upon by all reasonable men as animals, above all other tribes, the most hateful to God; and how much better think ye are those despicable souls, who follow and flatter them, and by so doing encourage them to persist in their iniquity, and even grow and increase in it? Is it not a most preposterous and woeful scene for reasonable men to behold one sort of people perverted in judgment through intemperance, and now in the leading-strings of Lucifer, oppressing without regret their fellow creatures, and those too, who are their real support? For what is six or seven shillings per week for six or seven souls in a family to subsist on, as the times now go; and I may say have gone for several years past? It appears self-evident, from the natural propensity men are endowed with, to beget their own species; that it hath been the will of the divine Creator, that this earth should be well stocked with people; but

but the tools of Lucifer countermines his gracious will, and keep out of the reach of multitudes the real necessities of life; I mean the fruits of the earth, which the beneficent Creator hath made to grow plentifully for the use of man (and think nothing but that he who formed all things, is able, and will increase the fruits of the earth as he sees men multiply and increase in virtue). Hence the labourers, &c. are deterred from entering on the marriage state, and procreation is greatly hindered; mean time great multitudes of useless horses and dogs, &c. are liberally fed with the precious fruits of the earth, which is abomination to the full extent.

What are riches when acquired by oppression? They are no less than a real curse to the supposed owner; for, speaking in a religious sense, we can call no riches our own that we do not make a right use of. How much less those which are procured from others by oppression. See what St Paul saith of those who are eager in the pursuit of riches in his first epistle to Timothy. Ch. vi. verses 9, 10. "But they that will be rich fall
 "into temptation and a snare, and into many
 "foolish and hurtful lusts, which drown men in
 "destruction and perdition. For the love of money
 "is the root of all evil, which while some coveted
 "after they have erred from the faith and pierced
 "themselves through with many sorrows." Bias, quitting a city about to be besieged, took no care to carry any of his treasures with him, as did the rest; and being asked the reason of that negligence; I bear with me, replied he, all that I esteem worthy the name of riches, my honesty and learning. Socrates being sent for by King Archelaus, and being promised great riches if he
 would

would reside at his court, made this reply, that a measure of corn cost but a farthing at Athens, and that water was to be had for nothing. Socrates and Bias, being temperate, were enabled to become proficient in philosophy; which, according to a modern author, is the desire of wisdom, the study and exercise of science, or rather it is the science of all things, and particularly teaches to know God and ourselves. Philosophy, said Xenocrates, roots out all pride, ambition, anger, avarice and injustice from the soul, and raises humanity almost to divinity. Temperance is the main spring of philosophy; for, where it subsists, noble and sublime ideas are kindled in the vigorous soul, which gives it wings to soar aloft, and there, with steady eye and pleasing transports of delight, behold the astonishing greatness and wonderful goodness of the all powerful Creator, in every visible part of his stupendous work; and the more he meditates upon the Almighty's just laws and excellent works, the more he becomes in love with them. Hence virtue becomes his only guide; and thus pride, ambition, anger, avarice and injustice, are rooted out of the soul. The way then to combat and conquer evil habits, and disappoint Lucifer is, as I have before observed, to substitute without delay temperance, instead of intemperance, which is the wretched mother of vice, sin, sorrow, misery and eternal death.

I imagine that there are several paragraphs in this little book which will at first sight be highly offensive to some kinds of people; I mean those who through intemperance are sunk in vice, and under the influence of Lucifer; however let them take heed what they do, and by no means endea-

your

your to hinder the good effects it may have in any country, lest they bring down a heavy judgment upon their own heads; for God is most assuredly above the Devil; and, as I have before observed once and again, God doth not afflict willingly, nor grieve the children of men; but his gracious and divine will is, that all may come to the knowledge of the truth, and be saved, through the mediation of his beloved son Jesus Christ, who, through his own voluntary death, became a propitiation for the sins of all mankind. Yet notwithstanding there is still a small task enjoined us by the divine goodness, in order to compleat our own eternal salvation, and fit us for the never-fading crown of glory, viz. We must perpetually have a living faith in God's mercy through Christ, with a thankful remembrance of his death, (which was no less than saving us from eternal misery) and be in charity with all men; must use the two holy sacraments, ordained by Christ himself with all due reverence, that is baptism and the celebration of the Lord's supper, they being accounted generally necessary to salvation. And altho' temperance will greatly assist in subduing the flesh to the will of the spirit, and prevent many follies and grievous sins; yet it may be expected, that frail human nature will still be liable to make some wrong steps; therefore, when we find that we have committed evil either by thought, word or deed, we must pray with a contrite heart to God the father of mercies, for pardon, and then for grace to strengthen us against the temptations of the Devil, the world, and the flesh; for he is a gracious God, and will abundantly pardon and assist a penitent sinner. It is likewise our duty to

pray

pray fervently to him for every want which is necessary to guide us in the right way, which leads to eternal felicity.

Our solemn thanks and praise, are also justly due to God the father, for all his manifold mercies, and inestimable benefits vouchsafed to us poor mortals, which we ought to render forth with a becoming flow of the warmest gratitude and filial love. I have mentioned a little before, that we are to be in charity with all men: This one word charity comprehends a great deal, no less than our duty to our fellow creatures, as enjoined us by the beneficent creator of us all. Charity is a most lovely thing, and is therefore what sound reason dictates to men should be used universally; the needy themselves being capable of putting in practice some useful and goodly branches of it; but that most humane part of charity, which comprehends giving and distributing to the bodily necessities of others, ought in some measure to be done proportionably, as we have it in our power; I say, as we have it in our power, for sometimes a man which is not very rich may be able, by the help of his voice alone, to give much more assistance to the distressed, than another who hath ten times more wealth. And such are they who are chosen by the people of any country, to take a share of the government of such country upon themselves. And there is nothing upon earth that can so well enable a man to put in practice acts of real charity as a strict temperance. Whoever enjoy this great blessing are the men, above all others, much the ablest to save themselves, and shew forth good and illustrious examples to others. There is neither christian nor jew, nor yet gen-
tile

tile, who hath a right use of his mental faculties, but finds that he hath a natural and strong inclination ingrafted in his soul, which leads him to practice real acts of charity to his fellow creatures. I might have summed up in a much less compass, the small task enjoined us by the divine goodness, in order to compleat our eternal salvation; for if, after the words gratitude and filial love, I had said our duty to our fellow creatures, consisted in doing to them as we would they should do to us, it would in a great measure have compleated the whole little task; for little it might be accounted were men to live temperately, and only as the law of nature teaches them. But alas! to the intemperate, who are deluded and bewildered, the task appears highly difficult.

Having a zealous desire to see my fellow creatures enjoy peace and tranquility in this life, to the end they may attain felicity in the next; let me remind them what St Paul saith of charity in the 13th chap. of his epistle to the Corinthians, from ver. 1st to ver. 9th, and ver. the 13th.

“ Though (says he) I speak with the tongue of
 “ men, and of angels, and have not charity, I be-
 “ come as sounding brass, or a tinkling cymbal: And
 “ though I have the gift of prophecy, and under-
 “ stand all mysteries, and all knowledge; and
 “ though I have all faith, so that I could remove
 “ mountains, and have not charity, I am nothing.
 “ And though I bestow all my goods to feed the
 “ poor, and though I give my body to be burned,
 “ and have not charity, it profiteth me nothing.
 “ Charity suffereth long and is kind, charity
 “ envieth not, charity vaunteth not itself, is not
 “ puffed up; doth not behave itself unseemly,
 “ seeketh

" seeketh not her own, is not easily provoked, think-
 " eth no evil. Rejoiceth not in iniquity, but re-
 " joiceth in the truth. Beareth all things, be-
 " lieveth all things, hopeth all things, endureth
 " all things. Charity never faileth, but whether
 " there be prophecies they shall fail, whether
 " there be tongues they shall cease, whether there
 " be knowledge it shall vanish away." And in the
 13th verse of this chapter St Paul calls charity
 greater than faith. Let us suppose two men equal
 in circumstances, but each of them low in the
 world, and at times have real need of each others
 assistance, one wants and asks assistance, which is
 lent him by the other with pleasure; but in turn he
 becomes necessitated for something which he knows
 the borrower can spare, asks it for a time but is de-
 nied; now he who denies is guilty of the heinous sin
 of ingratitude, and commits an offence against his
 maker; but intemperance hath so blinded the genera-
 lity of mankind in this miserable age, that such an
 action is scarce deemed so much as a trivial fault, not
 even among those who pretend to be the best
 christians. But if the above ingratitude be a heinous
 sin, as most certainly it is, for the very law of na-
 ture positively declares it to be such, what a mon-
 ster of ingratitude must he be, and how dreadful in
 futurity must be his reward, who gives his voice in
 a senate with a direct tendency to distress thousands
 of his fellow creatures who are his supporters?
 I need not here speak of his ingratitude to God, it
 being too notorious, and if possible too affecting
 even to the present generation; if such a one per-
 sist in his miserable iniquities, he will at the last
 stand trembling and self condemned. Let us sup-
 pose such a one at the very point of death, with-

out any the least hopes of time on-hand for repentance, and with a strong and more lively sense than usual of his guilt; behold the wicked actions of his mis-spent life, and particularly those which contributed to the distress of thousands, if he hath the power of utterance left, will he keep silent at his dreadful period? it is Lucifer's interest that he should, and not alarm the by standers at such an awful time; and we find that the most abandoned to virtue often finish the last of their life in the manner they have lived, that is they are too little sensible of their own wretched condition: but I have represented the before-named criminal as having acquired a more lively sense than usual of his own guilt, and supposing him able to speak, will he not with the dismal aspect of despair break forth a flattering voice and say.

Oh, that I had never been born! Oh, that I had never seen the light! &c. or may he not say he has ten ten thousand times more reason to curse the day of his birth than righteous Job had, and cry out Oh, intemperance! intemperance! Oh, wretched flatters and followers! Oh, abominable fashions and customs! Oh, pride! Oh, ambition! Oh, avarice! and Oh, that I had never aspired after riches nor false honours nor worldly grandeur! for these evils, alas! have to all eternity undone me. Oh, the bitterness of eternal death! my strength is gone, my glass is just finished, and I have no hope. Let us for a while take the above deluded wretch in another view, and suppose that, by a decay of his constitution or other cause, he hath left off to be intemperate, and is become in love with its opposite, viz. temperance, and thereby hath established his health, and hath acquired fresh
vigour

vigour both of body and mind, infomuch that now his flesh is, in a great measure, subservient to the will of his soul, and they strongly inclined to work together for good, what will be his first step towards a reformation?

No doubt but an humble and willing confession of his crimes to his maker will be his first object; and the next an unfeigned and sincere repentance for what is past. Let us now imagine that his sincere confession and disposition will be as follows. To the Lord our God belong mercies and forgiveness; therefore will I, in good earnest, acknowledge my transgressions; for my manifold sins do now appear exceeding great and terrible before me. Oh, that I had never been led into the dark and diabolical path of intemperance; for then might I have retained sight and strength and power, which through the grace of God would have enabled me to triumph against the temptations of the devil, and all the vices which intemperance hath now plunged me into; but alas! I have in general done the things which I ought not to have done, and left undone those very things which, in just gratitude to God and my fellow creatures, I ought most solemnly to have done. Now mine eyes are opened, now do I behold with horror the darksome paths wherein I have stumbled and fallen, and do most ardently beseech thee, O Lord God most holy, O holy and most merciful saviour not to deliver me into the bitter pains of eternal death; but spare me a little that I may become a most sincere penitent in very deed. I have trampled upon thy most sacred and just laws, even those which thou hadst with a fatherly kindness implanted in my heart; neither have I had pity upon my

distressed fellow creatures, when their real necessities demanded it. Oh, the wretched sin of ingratitude! how justly do I feel this tumultuous conflict within my breast?

It is I, who, through my learning and elevated station in life, ought to have been an exemplary patron of good works; for the new acquired strength of my reason and the divine scriptures, which I have at last begun to look into, declare solemnly that unto whomsoever much is given, much shall be required. But alas! the examples of my wretched life have been just the reverse, Oh, had but I and my equals walked in the comfortable paths of virtue, we should have been followed by multitudes, who are now murmuring and groveling in the destructive paths of ignominious vice. Oh, how grievous is this reflection to me? how doth it oppress my soul? how are my very bowels pained within me? yet nevertheless I confess to thee most merciful father, that my present sufferings bear but little proportion to the dreadful punishments which I have most justly merited at thy hands.

What a depth of iniquity and stupid folly was I sunk into, when, without hesitation, I gave my voice with a direct tendency to distress thousands of my fellow creatures, each of whom had as just a right to enjoy in moderation the real necessities of life as myself? Oh, wretched man that I am, surely I had then been under the influence of an evil spirit; but being then weak and confused I did not perceive it; my mental faculties having decayed, imperceptibly to me, as that detestable evil, intemperance, gained ground; and I must confess, that as soon as I am become weak, it was the
first

first work' of satan to instill pride and ambition into me, to support which I became covetous and oppressive, in order that I might be able to vie in grandeur with such as I thought, in other respects, were only my equals. Wretched and preposterous fashions and customs I also followed; and my hateful pride and ambition led me into such a base degree of wickedness, folly and ignorance, that I thought my situation would appear the more honourable and lofty, the lower I could reduce the industrious tribes of men, when necessity caused them to complain; I looked on their complaints as groundless, and attributed their noise to their ignorance and impudence; for alas! I had then forgot what it was to be hungry, and was become relentless, even when I heard the miserable cries of my half starved fellow creatures: but I have for a while been making just reflections and observations, respecting the industrious poor; and the more I reflect, so much the more have I been shocked and grieved to the very soul, to think that I should have been such a heavy scourge to them. Well might they and such hearts as could feel for them make strong cries for relief; their necessitous wants being truly deserving the greatest commiseration of every reasonable man. I confess I took the most shameful means to gain what I then foolishly imagined to be an elevated and honourable station and was so despicably mean, as premeditatedly to induce my rivals in folly and weakness to break through the laws of their country; but here I did not stop, for, in order to raise myself, the abominable crime of perjury was committed; and I had the audacity to shew myself publicly to be an infamous and downright

hypocrite, promising many things of great consequence, to many, which I myself and several of my flatterers well knew, could never be performed. Thus did I publicly act, and, by shewing forth unmanly, brutish and wicked examples to multitudes, I contributed not a little to spread vice and immorality over the land. Oh, that I had been a shepherd, or a day labourer, rather than have been lost in the black gulf of intemperance for such a length of time! Oh, that crying sin of ingratitude! how doth it afflict, perplex, and torment my soul? that is the black crime which, above all others committed in the course of my wickedness, loads me with the heaviest grief. Surely intemperance had turned the natural love and affection, which was at first implanted in my heart, into lust and cruelty; and I confess I knew little of what real charity meant; I was a stranger to real acts of charity, altho' I sometimes gave a little money, &c. about me near home; but then for such giving I expected praise, and received it in return; I did not then reflect that real charity was the very bond of peace and of all goodness; but most certainly it is, and the very noblest and greatest of all virtues; and how easy is it to remember to do by others as we would have others do by us? Oh, that I had been virtuous when I was at the fountain head; then should I have acted the part of an honest and upright man, and contributed, to the utmost of my power, to extend peace, prosperity, and comfort to all ranks of men! my first and chiefest object would then have been to alleviate as soon as possible, the distresses of my miserable fellow creatures; for sure nothing on earth can give a virtuous man more real and

lasting

lasting pleasure, than to have it largely in his power to exercise that noblest of all virtues charity. I confess that this happy change from intemperance to temperance hath made an astonishing difference in my mental faculties for the better; therefore my most hearty thanks are justly due to the divine giver of all good things, because he did not cut me off, as was my desert, in the midst of my abominable iniquities. What return then shall I make unto the Lord of all, as a sufficient recompence for the wretched sin of ingratitude committed against him, and also against thousands of my fellow creatures? alas! for such a recompense seems to be highly difficult; but the holy scriptures afford me great consolation; testifying that through a lively and stedfast faith in Christ, and an unfeigned and hearty repentance, I shall be saved. Sincere repentance then, without delay, is the momentous work I will most solemnly pursue, and with the assistance of divine grace become a humble convert, and virtuous christian; after which, if I have precious time on hands, I will spare no pains nor endeavours to assist, with my utmost vigour, in fishing and drawing men out of the unnatural and destroying gulf of intemperance; and blessed be the time that its foaming billows and hideous surges rolled and dashed me against the tempestuous shore; for, although I was wounded, bruised, and benumbed, I have escaped with life, as a bird out of the snare; and am now under the special care of the great physician of souls, who brought healing in his wings, I will hear no more flatterers, for their deceitful words ever greatly increased my follies: They much resemble ravens, who seldom

fly but where there is something to be got; and, as the wolf has some resemblance of the dog; so has the flatterer of the friend. Thus much I can now discern; but, in the midst of my intemperance, I was very incapable of judging who were my real friends, and who were despicable flatterers; and I will say unto them who have been my companions in committing the sin of ingratitude, &c. turn ye, turn ye, for why will ye die in your iniquities; leave off intemperance, that ye oppress no more; cease to do evil, learn to do well; keep in perpetual remembrance that it is required of us by the great creator, to do by others as we would they should do by us; and know assuredly, that unto whomsoever much is given, much shall be required; know also, that a large stock of worldly wealth or worldly power can only be of service to the man who is virtuous; for no other will make a right use of them. I now remember the words of our blessed saviour, viz. how hardly shall they that have riches enter into the kingdom of heaven? hence, to such as are without virtue, they will tend greatly to promote their eternal misery. Know likewise, that worldly honours and worldly grandeur, are but mere empty shews and shadows, when compared with solid virtue; and that, in order to become truly virtuous, intemperance must be absolutely banished; then the most difficult part of the task is finished. Let me, who am just escaped out of the mire, seriously conjure you to follow and be washed from your filth; for what will it profit a man if he should gain the whole world, and lose his own soul? our time is very uncertain, a day or even the next quarter of an hour may be our

last

last; I say our last; and where the tree falls there it must lie, for there is no repentance in the grave; nor can it be made in the life, which is bemired in intemperance. Put away therefore such a dreadful and deadly enemy from your presence for ever, that you may be able to look back, and have a clear view of your wretched ingratitude and miserable iniquities, to the end that you may give yourselves up to a most sincere repentance, and be saved at the last; and may be able, in your last hours, to say with the late truly great and virtuous man Lord Littleton, viz. "I would not change the pleasing consolation of a good conscience for the possession of the universe." Mean time I must withdraw for a while, having not as yet compleated my own repentance, but am so far advanced that it is now no longer a task but a comfortable duty, since the enemies which have warred against my soul are conquered. Before I leave you, I leave with you a few comfortable words our Saviour Christ himself hath spoke. "Come unto me all ye that labour and are heavy laden, and I will give you rest. Take my yoke upon you and learn of me, for I am meek and lowly in heart, and ye shall find rest unto your souls, for my yoke is easy and my burthen is light." I might here have represented a variety of other classes of men groveling in intemperance and laden with iniquities; but as none of the lower classes in Europe, are so capable of checking vice and immorality, by good examples, or on the contrary by ill examples, &c. and drawing multitudes into distress, wickedness, and misery as the leading men, I have written in the manner I conceived would be

be best for the present, and eternal good of mankind in general; and I hope that the surprizing increase of wickedness and wretchedness, will be a sufficient apology for my having written in the manner I have done. I have not the least design of stirring up any one kind or rank of people, against any other kind or rank of people, upon any one part of the earth; and hope my work when taken together will be looked upon by all who see it, as having the direct opposite and contrary tendency, viz. to encourage temperance and virtue, and to discourage intemperance and vice. However it is still doubtful, but that such as are the deepest sunk in vices produced from intemperance, will at the instigation of Lucifer, &c. deride and make a scoff at any one who so much as dares attempt to expose their blind and miserable follies, or endeavours to procure an increase of virtue. But as virtue is the fountain of everlasting happiness, and vice the fountain of eternal misery; and as I (as well as all other men) am most assuredly in duty bound to assist my fellow creatures according to my abilities, I must necessarily bid defiance to any tool or tools of Lucifer, who may be disposed to obstruct my endeavours in promoting virtue or moral goodness. And as I have before repeatedly observed, that God doth not afflict willingly, nor grieve the children of men; but on the contrary is very merciful, and desires that all may come to the knowledge of the truth and be saved. Therefore let me again seriously caution obstinate and bigotted sinners, and self-interested men to take heed what they do, and by no means endeavour to hinder the good effect

effect this little book may have in any country, lest they bring down a heavy judgment upon their own heads.

Thus far have I proceeded in order to shew the present generation of men, how much intemperance hath contributed to let in the power of that wily serpent the Devil among them, &c. For, as I have before observed, that when once intemperance hath gained the ascendant, the flesh is no longer subservient to the will of the spirit; hence there is a degree of weakness, and of consequence an easy prey is left for Lucifer, and where he can do the greatest ills, there does he work with the greatest vigilance, that is amongst heads of nations, and their intemperate flatterers. And if there be any that cannot relish this discourse, let them suspend their judgment, forbear their scoffing at it, and try for a while the experiment of my medicine, which is designed for the noble purpose of invigorating and strengthening both body and soul, in such a manner that the flesh will in a great measure become subservient to the will of the soul, and no longer obstruct nor obscure its godly purposes and shining virtues; consequently those who use the medicine with discretion, will be enabled to vanquish that monster intemperance, and triumph over the power of Lucifer, with the assistance of God's grace, which is not withheld from the humble, who make a suitable application for it. And they who use this medicine will, I presume, be humble (although their true courage and bodily strength be increased) for when the flesh becomes subservient to the will of the soul of any man; Lucifer's magnifying glass must vanish, and then will that man (let his station in life be
ever

ever so high) behold himself to be in reality a very little thing indeed, especially if he begins seriously to contemplate on the mighty works of the great Creator, which he will then (and not till then) be enabled to do with a high degree of delight.

I come now to shew what this medicine is, how and in what manner it is to be applied, and give reasons, and arguments, &c. deduced from repeated experiments, numerous observations, and from several eminent authors, to shew why this medicine, above all others, is capable of performing such a wonderful change in the human structure for the better.

The name of this medicine which I am about to recommend to the world, is WATER, and the purer it is the better. It is to be applied externally and internally to the body. The external application is by washing every part of the surface of the body with it, from the crown of the head, to the soles of the feet, in its natural state, in the warmth of summer; but in high latitudes in autumn, winter and the spring its cold may be so far removed by the help of fire, as not to make it too disagreeable when it comes in contact with the skin. And this salubrious method of washing, I would recommend to all ranks of people, from an infant to the exit of the gray headed, making allowance only for the few infirmities which cold bathing is against, in the greatest heats of summer. I would likewise recommend this said method of washing to be used through all the seasons of the year; but in high latitudes where there are pinching frosts, it is the least needful in the winter quarter, and especially in the time of frost. I
would

would also recommend it to the people in general, to wash every second or third day, at least for the first year, that they may be sensible of the comfortable benefits arising therefrom; after which it is to be hoped, that the method of washing will become a general and an established custom. As to the internal application of proper water, I shall speak of it hereafter; and likewise in another place, be very particular in explaining the method I think most eligible to tender people, in applying the water, &c. in the act of washing the body. But my present purpose is to convince mankind, that the greatest utility to both their bodies and souls, may be derived from the simple method of washing the body, and making a prudent use of proper water internally. But first, I shall treat of outward washing; which, by my own experience, and a great variety of observations, I find to be highly preferable to cold bathing, in either salt or fresh water; altho' such bathing hath been of great service to numbers, and performed many extraordinary cures; and, to make comparisons betwixt washing and cold bathing, I shall here quote some eminent men respecting the utility of cold bathing. Dr Williams says, "Cold baths were
 " held by the ancients in the greatest esteem, and
 " the present age can boast of abundance of noble
 " cures performed by them, and such as were
 " long attempted in vain by the most powerful
 " medicines. Bathing," Says he, "Will always act
 " the part of a diuretic, and plunging over head
 " in cold water, especially in that of the sea,
 " will do more in the cure of melancholy, mad-
 " nefs, and particularly that occasioned by the
 " bite of a mad dog, than any other medicine

“ There is nothing better adapted to the cure of
 “ frigidity, when owing to a former excess of ve-
 “ nery, than the cold bath. It will also contri-
 “ bute its share, to the cure of a simple gonorr-
 “ hoea and fluor albus. It is often successful in a
 “ palsy; and those who use it frequently are little
 “ affected with the changes of the weather.” Dr
 Wintringham recommends cold bathing, as one
 means to assist in the cure of the gout.

Dr Buchan recommends strongly the cold bath,
 in the place where he treats of the cure of nervous,
 hysteric, and hypochondriac diseases, and says,
 “ Nothing tends more to strengthen the nervous
 “ system than cold bathing: This practice if duly
 “ persisted in,” he says, “ will produce very ex-
 “ traordinary effects; but that when the liver
 “ or other viscera are obstructed, or otherwise un-
 “ sound, the cold bath is improper; or if the
 “ patient be weakened by it, or feels chilly a long
 “ time after coming out, it is improper.” He
 recommends cold bathing likewise against the
 king’s evil and rickets in children; for the cure of
 the rheumatism, barrenness, &c. Many other able
 authors on physic, might be here quoted, to shew
 the great benefits which might be derived from
 the prudent use of a cold bath; but Dr Buchan
 informs us, that so far as he has been able to ob-
 serve, the cold bath does as much mischief as
 good; but that is owing to the want of due care in
 using it. Physicians tell us, cold bathing may be
 considered as an aid to exercise: by it the body
 is braced and strengthened, the circulation and
 secretions promoted, &c. I have lived several
 years upon the sea coast, and at a place where
 people from the interior parts of the country have
 come

come to bathe; their stay was generally short, and that together with other mismanagements, and their being at times hindered by the inclemency of the weather, &c. I believe upon an average that little benefit was gained, as several have been hurt by it. Besides it is only the warmest season of the year in which bathing is practised, by reason of the coldness of the water; and therefore the effect, in many cases, is taken off betwixt each time of bathing, through the warmth of the weather at such seasons. Moreover tender mothers, timorous and low-spirited patients, with the inconveniences which attend many other patients, in getting to proper places of either salt or fresh water; I say these three things put together hinder great numbers of patients from making a trial of the cold bath: on the contrary there is nothing which needs hinder the body from being washed, at any season of the year, except a very few infirmities, which cold bathing is more against, altho' it be used with the greatest discretion. And the greatest benefit may be received from washing, when the season for cold bathing is improper, that is in the spring and at the approach of winter; for then the heats will not counteract the bracing and strengthening property of washing. Cold bathing too would have the best and most durable effects at these times of the year, were it not for the excessive coldness of the water, which prevents even the few who might not be hurt by it, from putting it in practice. The moist, damp, foggy, and rainy weather, so common in the spring and autumn, contribute greatly to relax and weaken the tubes and fibres of the human body (which predisposes it to

be subject to many fatal diseases) especially in the autumn, at which time the atmosphere is generally lightest; which, in combination with the moist causes of relaxation, produces a slow and languid circulation of the blood, a diminution of the secretions, and an obstructed perspiration; which defects occasion internal obstructions, a morbid state of the humours, and many very pitiable diseases; which might in general be prevented by the prudent use of washing the body, at such times as it would effectually supply the place of the cold bath. And physicians tell us, as I have before observed, that the cold bath may be considered as an aid to exercise, that by it the body is braced and strengthened, the circulations and secretions promoted. And these most salutary benefits, I have found by my own experience, may be effectually obtained by the delightful method of washing with pure water only, which never need be used so cold as to make the operation disagreeable. Having in the early period of my life been plentifully exercised in the open air by labour, play, &c. I was exceeding healthy and vigorous, but turning to a direct opposite employ, in a confined air, the great and sudden change effected an indisposition in my nervous system, which induced me to apply for relief; cold bathing was recommended: I used it in both salt water and fresh, according to the best advice. When the water was warmest, I found a temporary relief from it; but at such times the warmth of the weather, betwixt the times of bathing, apparently prevented my receiving any lasting benefit from it. And when the water was a little colder, going into it proved highly injurious to my constitution. I tried several

ral other medicines, all famed for curing nervous diseases; some proved hurtful, others somewhat beneficial, but I could not obtain a cure,

Long sea voyages were recommended; which was one inducement to my engaging in a sea-faring life; and which I pursued for some years upon the coast of India. I found no benefit in the fore part of my voyage to India, it being, in general, extraordinary warm weather, until we arrived near the latitude of the Cape of Good Hope: being in the month of September, the heat decreased, and the cold increased to the degree which produces hailstones; and then the increased weight of the atmosphere, together with a perpetual and accelerated motion (for there we had tempestuous weather and high seas) contributed greatly to my relief: and, before we had stretched twenty degrees to the eastward of the Cape, I thought the disease almost eradicated. However some years afterwards meeting with adverse fortune in India, occasioned by the tyrannical proceedings of certain Europeans there, I was desirous of returning home; but, as it was not the custom to let any return who had just cause of complaint, I was there detained upwards of two years, and about two thirds of the time at my own expences; and being the greatest part of that time under the displeasure of a powerful enemy, they who had been my best friends durst no longer be seen to take my part, but became as strangers: mean time I was exposed to the brutal insults of wretched European flatterers, who were full of deceit and iniquity; and who, from their former precedents had made me conscious that they were capable of the blackest deeds: several judicious

men, who have been informed of the many aggravating circumstances which attended me during the two last years in India, have adjudged that my sufferings would have been insupportable to most people; but, by the assistance of providence, I surmounted them: However, during the long and tedious conflict, my nerves received a second shock, and yet the second proved more slight and of shorter duration than the first.

Having been favoured, in a great part of the run betwixt India and the island of St Helena in our homeward bound passage, with pretty cold weather, a heavy atmosphere, and the perpetual motion or constant exercise without fatigue, I was again set right; altho' provisions which had been long salted were the greatest part of my food: thus far have I steered out of my direct course, in order to represent the great benefits which may be derived from long sea voyages, when the body is in a languid state; and how indispensibly necessary exercise is to the whole race of human beings in order to prevent a languid circulation, and morbid state of the humours, and the destructive diseases, and other calamitous evils proceeding therefrom. However, I have before observed, that washing will be an aid to exercise, and am conscious that, when it is tried, it will be so found two different ways, viz. in the first place, it will brace and strengthen the body, promote the circulation, and the different secretions; and all this without overheating the body, or in the least fatiguing it, which is too common in many kinds of exercise, and which often proves hurtful to tender constitutions, instead of being serviceable; and as washing performs several chief intentions, which

which plenty of gentle exercise can only effect in a tender constitution; somewhat less exercise will answer the purpose, and yet the body be kept in its due plight. It appears that, with people who do not pursue any active employment, there may be deducted, out of the time they set a part for exercise, at least twice as much daily as is required for the purpose of washing; which acquired time may be so employed, as fully to compensate, in half a year, for any materials which may be necessary to equip a person sufficiently for the operation, and the materials which will equip one person, will supply a large family; fresh supplies of water and clean dry towels only excepted. After people have had a little practice and are become more lively and active, through the benefit of washing, from ten to fifteen minutes time will be sufficient for the purpose of undressing, washing, wiping, and dressing again. In the second place frequent washing will be found to brace and strengthen the body, refresh, enliven, and cheer the spirits, in such a manner that they who are now the most averse to taking bodily exercise will, I make no doubt by the use of washing, have their resolutions so stimulated, by the acquirement of fresh vigour of body and mind, that they will not fail to take a sufficient quantity of what they may then call delightful exercise, which they will then find still farther contributes to establish and confirm their health.

And now, I hope, I have sufficiently shewn that washing will be an aid to exercise two different ways, provided that, in the course of this work, I can make it appear that washing really braces, strengthens, promotes the circulation, urine, perspiration,

spiration, and the secretions, and enlivens and
 cheers the spirits, of which I make no doubt; and
 they who read this book throughout, may gather
 a sufficient proof that there is no doubt of what I
 have here alledged respecting washing. Dr Buc-
 han says, "Frequent washing not only removes
 "the filth and sordes which adhere to the skin,
 "but likewise promotes the perspiration, braces
 "the body, and enlivens the spirits. Even wash-
 "ing the feet tends greatly to preserve health:
 "the sweat and dirt with which these parts are
 "frequently covered, cannot fail to obstruct the
 "perspiration. This piece of cleanliness would
 "often prevent colds and fevers." And although
 washing the hands and face is a common custom,
 yet peoples own feelings indicate to them that such
 slight washing in some measure enlivens and cheers
 the spirits, especially when people have been over
 fatigued; and if so, how much more will washing
 the whole body assist them? Dr Buchan, observes,
 that, "Exercise without doors, in one shape or
 "other, is absolutely necessary to health. Those
 "who neglect it, though they may for a while
 "drag on life, can hardly be said to enjoy it.
 "Their humours are generally vitiated, their solids
 "relaxed and weak, and their spirits low and de-
 "pressed." And tho' nothing can be more con-
 trary to the nature of man than a sedentary life,
 yet the far greater part of the human species are
 comprehended under this class. Almost the whole
 female world, and in manufacturing countries the
 major part of the males, may be reckoned seden-
 tary: and to such a tender and weak state are the
 generality of females sunk, that physicians tell us
 it is rare to find a woman of fashion (on account
 of

of hysteric and other nervous diseases) who is able to suckle her own child; and the ingenious Rousseau observes, that on the constitution of mothers, depends originally that of their offspring. There be others which are of opinion, that hereditary diseases are transmitted from either sex, to their posterity; however the case may be, the dreadful effects of intemperance is a melancholy consideration. It hath been said that almost all the female world, and multitudes of the males, lead a sedentary life; and, if one may judge from observation, it seems that at least half of them are averse to taking sufficient exercise in the open air, and that many who would do it are hindered, which is very wrong. Now it seems that the half who are unwilling to take exercise, cannot properly be accounted in a good state of health; they may rather be said to be dead in part, and stinking in part: for Dr Cadogan very justly observes that the breath and perspiration of indolent people, are never sweet. The most common cause of diseases is an obstructed perspiration, or what generally goes by the name of catching cold; and it is a common and true saying, that colds kill more than plagues. The perspiration is by far the most considerable discharge from the body in a healthy state; and as long as it goes on properly, people have seldom any complaints; but if it is obstructed, the health must suffer; and people being less sensible of this than of the other evacuations, are consequently not so attentive to the many causes which obstruct it. The fear of catching cold is doubtless one great reason why nervous and tender people dare scarce stir out of their houses in cold or moist weather; and, after they have once contracted an indolent habit, they become so dull and averse to exercise, that they can
scarce

scarce be prevailed upon to stir abroad in any season; and after having been long cooped up, they become relaxed, and have their pores so open, that then the consequence of taking an airing without doors generally produces a stiff neck, a sore throat, or perhaps something of still worse tendency. Nor are their houses capable of defending them from the attacks of cold; the very fire in a room, often produces a stiff neck, or pains in one side of the head; it being the property of fire to rarify and expand the air which comes nearest to it; then of consequence, to keep up the equilibrium, a constant current of fresh air rushes to the fire place, and that is it which drives the smoak up the chimney. Now a person in a relaxed state, sitting with one side exposed to the fire, and the other to the current of cold air, can hardly fail of catching cold. But there are many other circumstances which may occur in a good house, which will subject relaxed people to catch cold. The bed itself cannot guard them from it at all times. Above all other sort of people they are the most unfit to sleep in small apartments, as they would before morning, in the act of perspiration, take in and mix with their blood the same air which themselves had tainted: whereas a pure and elastic air is the only sort which can be expected to refresh them. On the contrary, were they to sleep in a large apartment, in cold weather, they would be subject to catch cold in the head or neck, except they lay so covered as to expose their nostrils to the tainted and noxious vapours arising from the perspiration of their bodies; and thus they are perpetually surrounded with a fluid which they cannot fly from, and without which they cannot exist; and

yet they are in continual dread of it. O what a pitiable state is this!

It is a true proverb, that a plain garment best adorneth a beautiful woman. What but an evil Dæmon then could tempt men to encourage the fair females to waste their time, their strength, and constitutions, in sedentary and sauntering employments, such as working with the needle, pieces of plain and useful cloth into holes and irregular lumps, in order to make a shew, which is not worth the notice of any reasonable being; and cannot attract any thing except weak heads. The plumage of a bird or a butterfly, the flower of the field, the lily of the valley, or even the moss which grows upon the rugged rocks is far superior, in point of beauty and grandeur, to any artificial garment which can be made with hands. A lady of Ionia shewing a fine piece of tapestry she had wrought, and boasting of her skill and ingenuity in the work, gave occasion to a Lacedæmonian matron, to shew her four sons all men of learning, probity, and good manners. These, said she, ought to be the pride of a woman of honour; 'tis in such works as these we merit praise: Plut. in his notable sayings. Had it not been through the growing weakness of mankind we should not of late have beheld such huge loads of folly upon the heads of weak necked females, which loads must have been attended with many great inconveniences respecting both time and health; a perpetual uneasiness must attend such a dress, especially when abroad in a high wind. The head must be overheated at times which would make it and the parts adjoining more subject to take cold, which produces pains in the head, the teeth, &c. And it is said, that such heads
have

have often been found pestered with live animals ; consequently there must have been plenty of dirt, which would not fail to obstruct the perspiration in part, and the dirt would likewise be imbibed into the circulating juices, all which is highly prejudicial to health. How strange is it that people who pride themselves in making a shew of outward cleanliness, should keep their bodies dirty within, and have a filthy skin ? But whither do I wander ? For were I to point out half the follies and evils arising from intemperance, it would take a whole volume to contain them. It hath before been observed that colds kill more than plagues, and that nervous and tender people are scarcely able by any means to avoid them. However frequent washing will be found to fortify the body against the attacks of cold in the strongest manner. This I know by my own experience, and we are not unacquainted with the common means which are used for preventing colds seizing upon the heads of these who cut off their hair ; as soon as it is cut off, and the head shaved, it is immediately washed with cold water, to prevent cold catching, and I have before observed that Dr Williams says, “ They who bathe frequently are little affected “ with the changes of the weather.” It seems to me that many of the indolent sort of people who have the greatest need of washing, will at the first be most averse to it ; but let me advise them as a sincere friend only to persist in the practice, for a little while, and it will banish indolence, and make them become in love with it, as they will find themselves more and more benefited by it. It is perhaps one of the safest and best diuretics in nature, as it performs the office with mildness, and

- doth

doth not, by overheating, cause a relaxation of the kidneys, or any other part of the body; but on the contrary, strengthens every particular part of the body, the stomach not excepted; and what other medicine is there known, in the universe, which can do this? and further, it will make a weak stomach crave pretty hard for victuals. Dr Buchan says, “ A free discharge of urine not only
 “ prevents the gravel and stone, but many other
 “ diseases, and that when the blood or other humours are disordered, nature generally attempts
 “ to free herself of the offending cause by the urinary passages.” In the present age, nature often wants assistance to enable her to expel the vitiated humours out of the body, and that in the mildest manner which can be invented. It is well known that strong stimulating diuretic medicines, by overheating, &c. have too frequently caused such a total relaxation of the filtering organs, as has produced very tragical effects in the human body. Sir Richard Blackmore tells us,
 “ That if the kidneys have lost their tone, and are
 “ stretched to a dimension or capaciousness beyond nature’s staple, they admit a great quantity of wholesome juices together with the superfluous serous parts, and let them pass promiscuously into the bladder, whence the nutritive juices are excluded with the urine, by which nature is defrauded of due supplies. In like manner, and from the same defect, the liver sometimes separates from the blood an immoderate plenty of bilious juices, or that at least become such after separation; by which means the receptacle of the gall, pours out into the intestines such an immoderate measure of its
 I “ bitter

“ bitter contents, that by a painful corrosion of
 “ the membranes, and instigation of their glands,
 “ often produces a great flux or looseness, and
 “ sometimes dysenteric symptoms. If the glands
 “ or secretory kernels in the lungs become flaccid,
 “ lose their tension, and grow excessively wide,
 “ they not only separate from the blood more
 “ ferous and phlegmatic humours than the service
 “ of nature requires should be excluded, but like-
 “ wise many wholesome juices, which together
 “ with them, rush through the channels too much
 “ enlarged, whence the patient defrauded of re-
 “ pair, grows lean and meagre: and when the
 “ like faulty disposition happens to the glands
 “ planted in the skin and dispersed through the
 “ whole surface of the body, they let an immode-
 “ rate quantity of ferous mixed with wholesome
 “ fluids evaporate through their too open and
 “ gaping pores, both in sweat and insensible trans-
 “ piration, by which inordinate evacuation the
 “ blood is impoverished, and the patient grows
 “ feeble and very obnoxious to taking cold, while
 “ the sharper and more pointed parts of the air,
 “ find free admission through such wide inlets to
 “ the blood and spirits, and make upon them their
 “ noxious impressions; whence coughs, defluations
 “ upon the lungs, and putrid as well as inflamma-
 “ tory diseases, often take their rise.

“ Nor is the event otherwise in the brain, when
 “ the strait and narrow meshes of that wonderful
 “ structure become too lax and wide; for then,
 “ besides the purer, more subtile and volatile parts
 “ of the blood, which are separated by that exqui-
 “ site strainer, to be exalted, sublimed, and con-
 “ verted into animal spirits, the active ministers of
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“ the fancy and imagination, as well as of the inferior and sensitive government, an inordinate measure of serous parts are admitted, and growing acid and austere in their receptacles, the cavities of the brain, they produce fatal convulsions in children, and often hypochondriacal and hysteric symptoms in adult persons.” Now it appears from the discourse of this eminent author, how very circumspect people ought to be in administering heating medicines; which tend greatly to relax, especially in tender constitutions. But to return to washing; it is an operation which may be performed with the greatest decency, as all are capable of doing the work effectually by themselves, and in private, except such only as are very infirm, and small children: and in the act of washing there will be procured at one and the same time, friction, exercise, strength of body, enlivened spirits, cleansing of the skin, a removal of the obstructions formed on perhaps many millions of the pores of the skin, and the minute pores themselves contracted into their natural size, in the most rational manner which can be imagined, and the cleansing and strengthening of the internal parts, with the other good effects before-mentioned, will follow.

All who have wrote of the plague universally agree that spongy and porous bodies of an obese habit, of a sanguine and phlegmatico-sanguine constitution, women, young persons and children, persons of a timid disposition, that are poor and live hard, or are given to luxury, and sit up late at night, are more apt to be afflicted with this disease, than the strong and intrepid. lean, nervous, endued with large vessels, &c. Therefore it

seems frequent washing will fortify the body in the best manner, against the many epidemic and endemic diseases; and also, against many other diseases and evils proceeding from the effects of unwholesome air. The passage which I had to India, was more than ordinarily long, owing to adverse winds, calms, &c. I had therefore the opportunity of beholding the terrible effects which the sea scurvy produced amongst us. In the passage, upwards of seven-eighths of the people on board were seized by it, many of whom died; and half of those who survived were reduced to a very miserable and pitiable condition. The disease first seized on those who kept themselves dirty, slept in the worst air, and continued most betwixt decks, where there was a perpetual putrid and moist air, which was highly offensive to the senses, three months before the scurvy made its appearance. Several circumstances contributed to render the air putrid and dangerous; particularly the effluvia arising from dirty cloaths, dirty bedding, broken meat suffered to lay long neglected in holes, and putrify; and tainted lungs; with other effects proceeding from indolence, &c. and there is the greatest reason to believe, that had it not been for the constant motion of the ship which promotes the the circulation, &c. the dismal effects of such a noisome air would have made its appearance much sooner. All authors, who have wrote on the sea scurvy, agree that the strictest regard ought to be paid to cleanliness; therefore, frequent washing with sea water would be the most effectual means, which could be conveniently used in long voyages, to prevent the scurvy or any other disease on board a ship, arising from a putrid air, for two reasons.

In the first place, it would brace and strengthen the nerves of the seamen; promote the circulation, perspiration and secretions, so as to contribute greatly to keep their blood and juices in a proper state; mean time it would enliven and cheer their spirits, by which means they would be enabled to set a just value on health, banish indolence, take sufficient exercise, and perhaps strive to excel each other, in keeping their cloaths, bedding and mess places clean; by this means the air between decks would be kept pretty good. In the second place, the pores of the skin would be kept in their natural state, and neither gape too wide, nor be obstructed with filth. The body will therefore be much better fortified against any impurities, which may be mixed with the air between decks, and also, be much better able to endure any sudden change of the weather upon deck: such as from a pure and hot air in the day, to great dews and fogs in the night; or a sudden change of the wind, from a warmer to a colder quarter. Upon the whole, frequent washing cannot fail of being the greatest preservative that hath yet been offered to the public, in order to prevent the scurvy and all other putrid diseases, &c. arising from a noisome or moist air. I do therefore seriously recommend the practice of frequent washings to my brother seamen, on account of its being highly conducive to health; and as it may also be a great means to reform the morals of men, and prevent multitudes from running into the greatest follies and extravagances. Washing has the property of subduing the flesh in a great measure, to the will of the spirit, as I shall endeavour to shew hereafter. Washing is very

practicable on board a ship, whether such ship be large or small; and conveniences may easily be made, so that it may be done with the greatest decency; and the importance of seamen's lives is so great, both to the general good of the nation, to which they belong, and also of their employers, that there will be little doubt of good conveniences being made, provided seamen resolve upon trying the simple and pleasant experiment: there is little doubt but frequent washings would likewise, in a great measure, prevent camp and gaol diseases; as they take their rise from similar causes, such as impure and damp air, dirt, &c. and there is seldom any thing to prevent such a salutary purpose from being put in practice. The fen countries, &c. are notorious for moist, thick air, and unwholesome water; the moistness of the air, physicians tell us, is the predominant cause of agues; and the moistness of the air, together with turbid and unwholesome water, the cause of the land scurvy; which two diseases might in a great measure be prevented by washing, and using good water for diet; which water may be procured in the fen countries, and I shall shew in what manner hereafter; much more might be said respecting the preventing and curing of many other diseases, not named in this book, by the prudent application of good water; but as my design is not to perplex people by writing a long volume, when a little one may be of as much service; I think it may be a sufficient inducement for people to try my medicine, when I shew them, that washing frequently, and making a proper use of water internally, will prevent almost all chronic diseases, cure several, and in short hinder three-fourths of the miserable evils

evils now incident to Europe, and alleviate three-fourths of the remaining quarter; as the above practice and a prudent use of proper water internally, if duly attended to, will be the most famous conquerer and vanquisher of intemperance and its inseparable and wretched companions, viz. a numerous train of destructive and unnatural vices. A modern author observes, that the Romans never triumphed over others till they had learned to triumph over themselves, viz. until they were themselves become temperate, at which time they would, through strength of body and mind, also become virtuous: and virtue, Plato says, is the health of a strong and vigours mind; and vice the disease of a weak and imperfect one. We find that the antient Romans held bathing in the greatest esteem, their costly and extensive baths are yet to be seen in many parts of the East; and as their climates were pretty warm, and admitted of bathing the greatest part of the year, no doubt but the practice contributed very greatly to make them temperate, virtuous, and a nation the most magnanimous of any on earth. But, to return to my narrative, which I dropped after having recited my being a second time set to rights by the benefit received in the run betwixt India and St Helena: after this, I continued in pretty good health, in my native country, for about the space of four years, and I have reason to believe might have so continued had I pursued an active life; but it was my fortune a second time to be employed in a sedentary and inactive business (for I had not then studied how to benefit by making a prudent use of the non-naturals). Therefore the consequence of my continuing too much in a confined

fined air, and in a manner inactive, and at times brooding on the unjust treatment and disappointments I met with in India, &c. gave a third scope to the afore-mentioned disease, which proved very obstinate and afflictive for three years; in which time I had recourse to various kinds of medicines, some proved hurtful and others for a time I thought of service; but the consequence of taking internal medicines was such, that when they proved of service in one way, they were generally hurtful in some other. [However, it is not my design to discourage the prudent use of medicine, for medicines were certainly made for the use of man; but in truth, powerful medicines ought in no case to be administered without the greatest circumspection, nor even simple ones for any length of time without precaution: feeling the pulse, and viewing the patients countenance, is not enough to indicate the true state of many patients. It seems more time than is generally used, among the poorer sort, ought to be taken to make proper enquiry into the nature of the disease, and constitution of the patient before medicine is applied]. But to return from this digression: cold bathing being of late years strongly recommended as the best means to cure nervous diseases, I again practised it both in salt water and fresh, but with the same success as formerly, and as before mentioned the weather being either too warm, or the water too cold, prevented my receiving any lasting benefit from it: and having in the course of seven years observed the religious, good natured, and affable natives of India, make a perpetual practice of washing themselves and children, which they said strengthened them: and I being

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on account of want of health, ready to try any safe and probable means to acquire it, resolved on trying the cleanly method of washing; begun the experiment, and in less than a month found great benefit by it; in less than three months I was a third time restored to health, but still continue the practice of washing, and am far from being inclined to leave it off, as I find it to be productive of the greatest good; it fortifies and attemperates the body, and may justly be called the guardian of virtue; and that which hath induced me to call it a delightful and pleasant medicine is, because I generally found myself strengthened and cheared before I had finished the operation. I have now no longer any occasion for cordials, drams, or fermented liquors to raise my spirits, they being cherished and ably supported by a natural state of temperance; nor is any kind of artificial liquor seemingly able to increase my bodily strength, it being superior to most people's who are equal to me in age and size, notwithstanding my only drink for seven months last, hath been no other than pure water, or a mixture of milk and water, in the proportion of about one-sixth of milk, to five sixths of water, although I have laboured pretty hard for a good part of the time, nor do I find the least occasion for any other drink, as there is none equal in goodness to it: we find it hath been the general opinion of learned men, especially in the late ages, that to subdue strong inclinations and wrong habits, was a thing highly difficult, but that when they are once conquered, nothing affords so perfect a contentment: as respecting my own case, in regard to strong inclinations and wrong habits, I had them, and I have reason to believe

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somewhat below a mean, when compared with the strong inclinations and wrong habits of the generality of mankind : however, the frequent use of washing, hath enabled me to subdue them without regret and without any difficulty.

And there is nothing now which seems to hinder me from enjoying a perfect contentment, except the innumerable vices of my fellow creatures, which vices will, doubtless in some degree, give the most virtuous christians some trouble and concern. The ingrafted law of nature indicates thus much.

*Of the CUSTOMS and DISPOSITIONS, of the
Natives of INDIA.*

HAVING been conversant with the natives of India, for about the space of seven years, I had the opportunity of observing their customs, manners, dispositions, &c. particularly at Bombay, Surat, and Cambay, which are populous places, and also at many towns of less note, situate betwixt the fore-mentioned places. There are a great variety of sects in these places, and one general custom prevails, which is washing themselves from head to foot; multitudes of them wash daily, and the rest of them frequently, and that with fresh water; and this salutary and cleanly custom, they pursue through all the different stages of life, in every season of the year; and I have observed, that those who live upon the banks of the sea, always choose fresh water for the purpose rather than salt; but the Indian seamen use salt water on board of ship, when fresh cannot be allowed them. The predominant cause of that cleanly custom appears to be in general owing to their finding themselves strengthened

strengthened and cheared, and their health supported by it, altho' the rigid Mahometans, who are but few in proportion to the whole, may pay some regard to it on account of religion. They are an extraordinary healthy people, tho' the food which the generality of them live on is but mean, and water is their common drink, yet numbers of them live to a great age. In the hottest seasons some sorts of fish, which have been caught six or seven hours become putrid, the Indians eat them, and several other sorts of fish of a coarse and bad quality; which if the Europeans should eat, the flux, &c. would leave scarce any of them alive. It is a great wonder to see one crooked made, or deformed person, among the Indians; and there are few, if any, chronic diseases amongst them. I do not remember the seeing, or hearing, of any of them, being afflicted with the gout, palsy, scurvy, melancholy, madness, rickets, rheumatism, &c. (and their children are so very healthy, that it is uncommon to hear one of them cry): and if such diseases do happen they must be very rare, notwithstanding the air in their climate is subject to as great changes as in Europe. The change from heat to cold, between three in the afternoon and four in the morning, in the hot season, is as great if not more so than in any part of Europe in the like distance of time.

And in the hot season the change of the air in respect of drought, and moisture, viz. betwixt its dryness in the day, and moistness in the night, occasioned by copious dews is extreme; yet the natives sleep exposed to these dews upon the tops of their flat terraced roofed houses, and other parts without doors, and take no harm; but when the Europeans use this method, the consequence commonly

monly produces fluxes, or other mortal diseases, which seem to be owing to no other cause than relaxation which occasions their insides to be laden with morbid humours, and their outsides covered with fordes and dirt, by which means many of their pores are obstructed, and many others are left gaping too wide, which subjects the body to noxious impressions of the night dew. Mr Boyle observes “ that upon the coast of Coromandel, and “ the most maritime parts of the East-Indies, there “ are, notwithstanding the heat of the climate, annual fogs so thick as to occasion those of other “ nations, who reside there, and even the more “ tender part of the natives, to keep their houses “ close shut up.” In the time of the monsoons or rains, which last near five months, there are at times thick fogs, a great dampness is occasioned by the excessive rains, and the time of the monsoons, is the most unhealthy to the natives as well as the Europeans, however the natives stand it much the best.

The small-pox, fluxes, and fevers, seem to be the principal diseases which carry off the natives, but no one of these diseases make near the destruction amongst the natives, as it doth amongst the Europeans, in proportion to the numbers resident in India. However there is reason to believe, that should the Europeans at home, fall into the cleanly custom of washing, and pursue it through life, they might travel the globe over, and in any habitable climate enjoy near as good a state of health as the natives of such climate. For I make little doubt but that the laudable custom would soon enable them to set a just value on health, and despise intemperance. The natives of India which I have been conversant

with, are in general extraordinary temperate, inoffensive, and harmless. They are not given to pride or ambition, (they know far better things) but on the contrary charitable, courteous, meek, and gentle, and bear up against trying misfortunes, with that true courage and fortitude, which would do honour to an European philosopher. They are also people of a tenacious memory, and very able to learn either arts or sciences, being people of a sound judgment; they are likewise robust, and ingenious. And let their religions be what they will, they are in general a God fearing people, and seem naturally given to devotion, in which they spend a good deal of time, in the most humble, and supplicating manner, praying with great fervency: I say, they seem naturally inclined to adore, and reverence the great creator; for they have no inquisition, nor ecclesiastical courts to dread; and when they speak of the great creator, it is with the greatest reverence; they are therefore far from taking his name in vain. However, there are some intemperate people among them, who take stupifying doses of arrack, opium, bang, &c. and their leaders are too often included in this class, which sometimes produces tragical effects. They sometimes turn against the European companies servants too, but are for the most part patient to a wonder, long suffering, and put up with many injuries, and gross insults, rather than engage in a brutal war. But when foreigners, through fair pretences get footing among them, and afterwards commence hostilities, &c. against them by land, and commit depredations by sea for a length of time, and will hear no reason, they are sometimes necessitated to take up arms; but as they are gene-

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rally temperate, the ingrafted law of nature directs them not to throw away their own lives in a brutal manner, nor take away the lives of others, they see so ill prepared to die; and thus, because they manage their arms with reluctance, such conduct is imputed unto them as cowardice. But who can charge these brave Indians with cowardice, when even their mothers, in these modern times, frequently exhibit, on account of their religion, and without the least compulsion, a true courage superior to that of Alexander himself; for they have been known even to set fire to their own funeral pile, and without any restraint continue in it, and suffer themselves to consume to ashes. Calanus, an Indian, having taken leave of his friends, and settled the affairs of his household, came to a large pile of wood, which he had ordered to be raised, placing himself in the middle, caused it to be kindled, and with an unshaken constancy endured the flames, singing praises to his Gods, whilst the least power of utterance remained; Alexander the Great, being in that country, was present at that great sacrifice, and confessed himself overcome by the martyr in courage, and greatness of mind. Plut. in the life of Alexander.

It is common for the Indians to fight with a knife, and conquer that devouring animal the Shark, when it is just ready to crush and swallow them up in the water; and I have seen them make a constant practice of navigating in particular parts of the gulph of Cambay, which, on account of the dangers arising from the prodigious tides, &c. very few Europeans durst follow them. They are very bold likewise in fighting, seizing, and taming wild beasts. But as they do not choose to be dashed to pieces with cannon

non-bullets, by plunderers, &c. who have not the least right to disturb them, they are accounted cowardly, and as it is the custom of such as commit rapine, &c. to plead some excuse, for the purpose of screening themselves, the Indians are charged with being treacherous, deceitful, &c. And if there be any who may imagine I have wrote too favourably of the dispositions, and actions of the Indians, I refer them to Holwell's, and Roe's account of Indostan, which will corroborate what I have advanced respecting their goodness, &c. And I must needs conclude, that the laudable dispositions of the natives of India, is greatly owing to the judicious use they make of pure water.

The Turks use frequent washings and bathings, which wholesome customs doubtless contribute not a little to enable them still to continue a people of good morals; for we find they are exceeding temperate, just in their dealings; and they too, as well as the forenamed Indians, seem naturally given to devotion, in the practice of which they are very sincere. And Dr Brookes, the Geographer, says, they are charitable to strangers, let their religion be what it will; and that no nation suffers adversity with greater patience than they.

Now, I hope it doth in some degree appear by what hath been said of the Romans, the natives of India, the Turks, myself, &c. that washing doth in a great measure subdue the flesh to the will of the spirit; and I would endeavour to shew, that washing has that property; but as there are many fixed parts, and even circulating fluids, in the human body, whose offices and properties have only been guessed at, by the most able and ingenious anatomists; and as no one hath been able

to determine, whether the residence of the Soul is in any particular part, or is diffused through the body, it need not be expected that my endeavours will be any more than superficial. In the first place it is well known, that people who labour moderately without doors, are the strongest both in body, and mind, the most healthy, the least affected with that pitiable weakness, pride; the least subject to become drunkards, and generally people of the best morals; and their strength, their healthy and lively complexion, indicate to us, that their blood and juices are most pure of any people's in general. On the other hand sedentary and indolent people, are in general just the reverse, especially, if they indulge themselves in taking more nourishment, than they can easily digest, but some are more and some less addicted to vice.

I have before observed, that Dr Cadogan tells us, the breath and perspiration of indolent people are never sweet, (this is too true, and may generally be proved); of consequence it follows, that the blood and juices of such people are foul, and in some degree morbid. Cutaneous diseases are much more common amongst indolent and sedentary people than the out door labourers; which is another proof of a foul inside, which generally proceeds from a relaxed and weak state of the bodily organs, they being no longer able to perform with vigour their respective functions. Pride is very apparent in the sedentary and indolent: do but observe the generality of those who sit crooked at their employ, and have the natural course of circulation retarded, and other necessary functions hindered in a confined air; for instance, one who sits
cross

cross legged the greatest part of the day, will frequently exhibit that vice, in a more than ordinary degree: And we find that numbers who fall into various chronic diseases, are commonly the most perverse and stubborn in their tempers, frequently changing their dispositions, and running into such extravagancies, as exhibit a great weakness of mind, which evil seem to proceed from a weakness of the body, and a vitiated state of the humours; these unhappy people are therefore very far from having their flesh subservient to the will of the spirit. There are many drunkards, (whose constitutions are not quite destroyed,) who, when they are set upon a debauch, continue their career, and scarce stop two days together, until their money is spent; but when it is gone, and they are labouring for more, they often gain strength and reason to forbear the practice for some time after they have acquired more money.

The latter part of this account seems to indicate, that the more vigorous a man is, the abler he is to hold out against vice; and the fore part, just the contrary, as drunkenness never fails to weaken both body and mind. And we find likewise, that divines in all ages have preached up temperance, and strongly recommended it, as a great means to enable men to forsake vice, and increase in virtue. It is a fact, that in a state of temperance, the blood and juices are the most pure, and also the body and mind in their greatest vigour. It appears then, upon the whole, that washing has the property of subduing the flesh, in a great measure, to the will of the spirit, by strengthening the body, and enabling it to expel the vitiated, morbid, obstructing, and offending humours, and substance,

by means of increasing the circulation, urine, perspiration, and the secretions in general. If it were necessary more might be said on this head; and I shall give a few more hints which may perhaps tend to encourage people to try the experiment.

“ As the actions or conditions of the body,
 “ so also the diseases thereof may be reduced
 “ to three general heads, viz. those of the solids,
 “ and fluids, and those compounded of both. The
 “ solids, that is the bones and flesh may be disor-
 “ dered five ways, viz. rendered turgid by tumors,
 “ cut by wounds, corroded by ulcers, &c. removed
 “ out of their places or discontinued by fractures
 “ and contusions. Diseases of the fluids are in the
 “ blood or spirits. Those of the blood are two,
 “ such as thicken and retard its motion, or such as
 “ attenuate and accelerate it. To the last kind, the
 “ fever and feverish affections only belong. All
 “ other diseases of the blood belong to the former.
 “ The diseases of the animal spirits arise either
 “ from an intermission or retardation of their mo-
 “ tion, or a diminution of their quantity, or dis-
 “ order in their quality. Lastly, diseases of the
 “ fluids, whether those of the blood or spirits, are
 “ seldom long confined thereto, but come to disturb
 “ and impede some of the functions of the solid
 “ parts, and at last corrupt the substance of the solids
 “ themselves. Hence arise compounded or com-
 “ plicated diseases, which are infinitely various.
 “ Almost every disease is owing to the bad regula-
 “ tion of our lives, either from too much or too little
 “ sleep, too much or too little exercise, &c. some-
 “ times they are caused by things without, and
 “ very often by an abuse of food; that is by our in-
 “ temperance in eating and drinking, which is so
 “ much

“ much the more injurious to us, because it affects
 “ us inwardly.”

The above is the opinion of able physicians. It hath been said, that the diseases of the blood are two, such as thicken and retard its motion, or such as attenuate and accelerate it. And that, to the last kind, the fever and feverish affections only belong; and that all other diseases of the blood belong to the former. By this, and what follows, it appears that by far the greatest part of the diseases, incident to the human body, are owing to the blood being too thick, in which state the circulation is languid, and a foul morbid state of it, and the juices ensues, which often occasions fevers, as witness the following. Sydenham tells us, “ that a fever is nothing
 “ else but the effort of nature, to free herself of
 “ some morbid matter which she finds injurious, in
 “ order to establish a better state of health.” And Dr Williams informs us, “ that a fever is not always
 “ a primary disease, but is often the symptom of
 “ other maladies as a cachexy, scurvy, phthisis,
 “ lues-venerea, dropfy, &c. and renders them more
 “ cruel and dangerous; however, says he, it is not
 “ always pernicious to the human race, but some-
 “ times vanquishes its own cause, and supervening
 “ to other diseases, expels them out of the body;
 “ thus palsies, epilepsies, convulsions, spasmodic,
 “ and hypocondriac affections, have been cured by
 “ fevers; and many valetudinarians have, by a fever,
 “ been restored to a healthful and vigorous consti-
 “ tution. The cause of fevers is not heat alone,
 “ says Hippocrates, *de vet medic*; but heat and bit-
 “ terness together, heat and acidity, heat and salt-
 “ ness, and innumerable other combinations in the
 “ blood.” It is found nevertheless, by experience,
 “ says

says Dr Williams, “ that some persons from sound
 “ and perfect health, where there has been neither
 “ a plethora or any cacochymical disposition to
 “ cause it, have fallen into a fever; because
 “ perhaps some very extraordinary alteration in the
 “ air, or some great change in their way of living,
 “ or some considerable error in the fix non natu-
 “ rals has happened.” Sound bodies may, on such
 occasions, be seized with a fever, only to the end
 that their blood may acquire a new state and con-
 dition thereby to accommodote itself to the altera-
 tions of the air, way of living, &c. It appears then
 upon the whole, that even fevers may in general be
 prevented by the prudent use of washing, as it
 attemperates and fortifies the body in the strongest
 manner against the sudden changes of the weather,
 or noxious exhalations in the ambient air, and as
 washing will keep the blood and juices pure, scarce
 any defect need be feared in the animal spirits,
 except such as proceed from wounds, fractures,
 bruises, &c. which casualties sometimes may happen
 even amongst the temperate people; however, if
 washing becomes general, such pitiable misfortunes
 may perhaps be reduced to one tenth of the number
 we now have: as those diabolical inventions of war,
 duelling, drunkenness, and other brutish, unmanly,
 and unnatural customs may in great measure cease.
 Physicians tell us, that water in the act of cold bath-
 ing, enters by the pores of the skin, mixes with the
 blood and dilutes all the juices. Transpiration
 is used by some authors, for the ingress or
 enterance of the air, vapour, &c. through the pores
 of the skin, into the body. Cardan by this kind
 of transpiration, accounts for the prodigy of a wo-
 man whose daily urine weighed twenty seven pounds,
 though all the food she took, both dry and liquid, did

not exceed four pounds. Dr Baynard also suspects some such transpiration to be the case in hydropical persons. It is proved by the Florentine experiment of filling a globe of gold with water, that the globules of water are surprisngly small, for when the globe was pressed with great force, it caused the water to transude through the pores of that compact and metal, without any change, the globules not being ponderous, of elastic nature, nor liable to fracture. Physicians inform us, that water is admirably adapted for a solvent, or readily entering the pores of salts, and coming in full contact with all their particles, and thus it will pass where air cannot, on account of its moisture or lubricating power, and will therefore soak through the close pores of a bladder, which bladder will contain air, although it be strained and greatly stretched by the elastic spring of the air contained in it. Hence it appears, that when moderate cold water, hath by its constringing and cleansing power, reduced the pores of the skin to their natural size, and state, there will still be left an enterance for pure water, and also for such small particles of air as are friendly to nature, whilst the larger and more sharp pointed particles of air will be debarred without, and prevented from making their noxious impressions within, such as raising violent and unnatural conflicts in the body, as coughs, desfluxions upon the lungs, and putrid as well as inflammatory diseases. Now, by the foregoing observations, it is plain, that pure water in the act of washing, with the help of friction, must enter the body, mix with the blood, and dilute all the juices, and that in a moderate degree, or even as the operator chooses, and this, at any season of the year: Water is the vehicle for all the nourishment

we take, and is the greatest dissolvent that we have and as the too great consistence, or over thickness of the blood, is the cause of almost all the diseases incident to the human body, it appears that the water which is mixed with the blood in the act of washing, must have extraordinary good effects, internally, as well as upon the external surface, or skin; for it seems very probable, that the purer the blood is, the purer and better prepared will the animal spirits be to co-operate with the soul.

I have before represented washing frequently, as the most famous stimulant to bodily exercise, it having the property of bracing, and strengthening the body, and cherishing the spirits, &c. And that bodily exercise still further contributes to the health, and strength of body and mind, may be gathered from the following accounts of able authors. Exercise increases the circulation of the blood, attenuates and divides the fluids, and promotes a regular perspiration; as well as a due secretion of all the humours; for it accelerates the animal spirits, and facilitates their distribution into all the fibres of the body, strengthens the parts, creates an appetite, and helps digestion: whence it arises, that those who accustom themselves to exercise, are generally very robust, and seldom subject to diseases. And Dr Cadogan tells us, as I have before observed, “ that
 “ inactivity forms obstructions, in these exquisitely
 “ fine parts, upon which the health and vigour,
 “ both of body and mind depend entirely, and
 “ lays the foundation of many diseases to come,
 “ which the industrious and active never feel.
 “ He further says, that no man can have these delightful sensations, who lives two days with the
 “ same blood, but must be languid and spiritless;
 “ that

“ that in a state of inactivity the old humours pass off
 “ slowly, and insensibly perspiration is considerable.
 “ He also very justly observes, that inactivity forms
 “ obstructions in these exquisite fine parts, upon which
 “ the health and vigour of body and mind depend en-
 tirely.” Now, cold bathing removes obstructions,
 which are not too strongly riveted, and washing will
 do the same ; but the frequent use of washing, will
 effectually prevent obstructions from forming, as well
 in the internal tubes and glands, as in the skin,
 especially when proper water is used for internal pur-
 poses. Therefore the prudent use of frequent wash-
 ings, with the internal use of good water, will keep
 in their natural state these exquisite fine parts, upon
 which the health and vigour, both of body and
 mind depend entirely; and prevent the foundation
 being laid of many diseases, (which for want of
 washing might come), and also the evil consequen-
 ces arising from a weak state of the mind. Now,
 from what has been lately said, here is another
 appearance, that washing will in a great measure
 subdue the flesh to the will of the spirit; for I pre-
 sume that frequent washing, will soon enable people
 to set a just value on health, which will of conse-
 quence induce them to look out for good water,
 for the use of diet, &c. The animal spirits are a
 very subtile fluid, supposed to be prepared from the
 more subtile and volatile parts of the blood, by that
 exquisite strainer the brain, and thence diffused into
 all parts of the body, for no less a purpose than the
 performance of all animal and vital functions.

The ablest authors acquaint us, that our percep-
 tions and actions, are supposed to depend on the
 facility with which these spirits pass from the
 brain

brain to the nerves, and back from the nerves to the brain: for if the brain, the cerebellum, or the spinal marrow be hurt, there happens in all the parts, where the nerves are distributed, which proceeds from the disordered part, convulsions and palsies; and if any nerve be tied or cut, the parts below the ligature lose their senses and motion, while those above continue in their former state. It seems that even the goodness of our perceptions and actions greatly depend on the good condition of the animal spirits, and their passages; how highly necessary then is it, for men to abstain from intemperance? a thing, which if continued, never fails to produce the most dreadful effects in both the body and mind of man. The more the animal spirits and nerves are hurt by intemperance, the less we are alive, and the less able are the spirits to co-operate with the soul, or govern muscular motion; and thus we find, that some, who are become relaxed and dull, think it a trouble even to lift their hand to their head, and many appear inclined to turn day into night, and night into day; notwithstanding, it is well known that the morning air is much the best, and that it is better and more natural to be up with the sun, and make use of its light, than to breath in an air tainted by the effluvia arising from putrid candles, and rendered moist by the return of the falling vapours.

Now the predominant cause of the preposterous custom of turning day into night, seems to have taken its rise from intemperate and debilitated people, many of whom think it a trouble to go to bed, and would take it as a great punishment were they obliged to rise early in the morning :
thus

thus one kind of intemperance begets another, and through the abuse of the non-naturals in Europe in youth, as well as in other periods, it may be supposed that few in the present age arrive at full perfection, respecting their strength of body and mind: the first causes of palsies, melancholy, and madness are frequently the fruits of intemperance. These three diseases all suppose a weakness, and a defect in the nerves or animal spirits; and how far the flesh is from being subservient to the will of the spirit, in these three diseases, and especially in the last, is too notorious. Yet we find, that when all other medicines have failed, cold bathing hath often proved an effectual cure in all the three cases; and I make no doubt, but that washing will have as good an effect in such obstinate cases, much more prevent the cause of such alarming diseases. Therefore it may be concluded, that the frequent and prudent use of washing, with proper water for the use of diet, will by invigorating the body, diluting, cleansing, and attemperating the blood and juices, reduce the glands, the nerves, the animal spirits, &c. to their natural state, and keep them so; by which means the spirits will act with vigour, in the various parts of the body, and much more conformable to the will of the soul, which will then be much abler to command the passions, and with the assistance of Providence defeat Lucifer's intentions, viz. intemperance, and a train of woeful and dismal vices, with an unshaken, undaunted, and magnanimous resolution.

Physicians observe, " That sweat in its primary
 " effects is always hurtful, that is, whilst it sur-
 " rounds the body and adheres to the skin; and al-
 " though

“ though perspiration is insensibly performed, several authors inform us, that it is by far the most considerable discharge from the body.” The use of perspiration, say the physicians, “ is to preserve the suppleness of the papillæ of the skin, to carry the saline particles off from the blood, and by this means to render it more pure, to preserve the body from various diseases, and to contribute to the cure of the most dangerous distempers.” They likewise acquaint us, “ That the matter of insensible perspiration is a fine subtile fluid, which exhales from the body, in the form of vapour, and proceeds from the whole surface, and every cavity of the skin, that it is of an aqueous and saline nature, and seems to have a great analogy with urine; because in a healthy state the increase of the one diminishes the other.” The perspired matter, being of the nature of urine, must be highly acrid, and putrid too, when it hath continued some time out of the body; and that a great quantity of it adheres to the skin, and cloths adjoining, is plain from their being much fouled by it. Now, as it is dangerous if continued within the body, it must be hurtful to have part of it, the *fordes* of sweat, &c. imbibed and mixed again with the blood, and that this is the case, is the general opinion of physicians, and is without a doubt. The *fordes* and filth which adhere to the skin, cannot fail of being otherwise than dangerous, as they obstruct the pores, and prevent a regular and equable perspiration. “ It is remarkable,” says Dr Buchan, “ That in most eastern countries cleanliness makes a great part of their religion: The Mahometans, as well as the Jewish religion, enjoins
 “ various

“ various bathings, washings, and purifications.
 “ No doubt these were designed to represent in
 “ ward purity, but they are at the same time cal-
 “ culated for the preservation of health ; however
 “ whimsical,” says he, “ these washings may ap-
 “ pear to some, few things would tend more to
 “ prevent diseases than a proper attention to
 “ many of them. Frequent washing,” says he,
 “ not only removes the filth and fordes which
 “ adhere to the skin, but likewise promotes the
 “ perspiration, braces the body, and enlivens the
 “ spirits ; even washing the feet, tends greatly to
 “ preserve health. The sweat and dirt with which
 “ these parts are frequently covered, cannot fail
 “ to obstruct the perspiration ; this piece of clean-
 “ liness,” says he, “ would often prevent colds
 “ and fevers.” I have heard it affirmed by a cre-
 dible witness, that a seaman in the Indian ocean,
 who thought it a trouble to have sweaty feet ;
 in order to stop the sweat, smeared them over
 with pitch, which error soon occasioned an almost
 total loss of his sight, and that it was some time
 before the surgeon could restore it. Now, by the
 above and many other circumstances, it appears
 that a regular and equable perspiration is by far
 the most salutary ; and it appears, the most ra-
 tional and natural, that every superfluous and
 offending humour, which will go off by sweat or
 perspiration, should be allowed a natural passage
 through that part of the skin, which is in its own
 neighbourhood. I say a natural passage ; for in
 order to preserve health and vigour, the pores of
 the skin, ought neither to be gaping too wide nor
 yet obstructed with filth. People who have it in
 their power to change their apparel often, and can

fee no dirty appearance upon their skin, may imagine their pores are not obstructed by it, but the matter which they perspire is commonly more glutinous and adhesive than that of the more laborious class of people; and if the affluent choose to discover whether they have or have not cutaneous obstructions, occasioned by the adhesion of fordes, they need only wash and observe the filth which rises from the surface and pores of their skin, through the effect of pure soft water, and friction only. Frequent washing is therefore undoubtedly the most effectual means whereby to obtain a regular, equable, and natural perspiration from every part of the human structure; and physicians tell us, as I have before observed, that whilst perspiration goes on properly, we have seldom any complaints; but that when it is obstructed, health must suffer. "The brutes themselves, says Dr Buchan, set us an example of cleanliness. Most of them seem uneasy, and thrive ill if they are not kept clean; a horse that is kept thoroughly clean, will thrive better on a smaller quantity of food, than with a greater where cleanliness is neglected; even our own feelings, says he, are a sufficient proof, of the necessity of cleanliness. How refreshed, how chearful and agreeable does one feel, on being shaved, washed, and dressed, especially when these offices have been long neglected? Most people, says he, esteem cleanliness, and even those who do not practise it themselves, often admire it in others. Superior cleanliness sooner attracts our regard than even finery itself, and often gains esteem where the other fails. The human body, as it is naked when disrobed, and hath such wonderful pliant,

and

“ and active limbs, seems by far the best adapted,
 “ of any terrestrial creature, for the purpose of
 “ making and keeping itself clean.” And such a
 high esteem have the natives of Asia for it, that
 they count it very unnatural not to wash; and the
 Europeans a dirty people, because they do not
 wash; and by what I have learned from that good
 natured people, the Europeans would be held
 in much better esteem by them, were they to prac-
 tise the salutary custom; and were the practice of
 frequent washing, to become pretty common in
 Europe, I must needs think, that in this present ge-
 neration, such as practised it, would perhaps
 look on them who neglected it, as unnaturally
 bemired and weakned by weltering in their own
 dirt. However in the primitive ages of the world,
 there was less need of washing, as people generally
 lived nearer to what nature directed them (their
 blood and juices were purer); they therefore had
 not so many family diseases to prevent or wash
 away; nevertheless we find washing and bathing
 was customary in the East, witness the Romans and
 others. Several authors give us compendious theo-
 ries of diseases. Benetoke deduces all human
 diseases from the scorbutus; Musgrave from the
 arthritis; Dr Woodward from the bile; some from
 the venereal virus, which has lurked in the seed, ever
 since the sin of Adam; some from extraneous fer-
 ments formed in or out of us; and some from worms.
 Now, by the variety of opinions of able men, we
 may conclude how difficult a matter it is to form
 a right judgment of the seed of all diseases; but,
 whether any particular evil above named is the
 seed of all diseases, or whether a combination of
 two or more of them creates diseases, it signifies

no great deal, so long as the prudent use of water will in most cases keep under restraint such seeds, and highly contribute to make us the right heirs of eternal felicity beyond the grave. Eternal felicity is the chief prize we have to run for; every other thing here below, when put together, in respect of real value, bears none, no not the least proportion to it: for we see that worldly honours and worldly riches too often create pride, irreligion, and an inability to engage with ardour for the chief prize; to obtain which was the very end for which we were created. There is no such thing as real pleasure to be obtained, even by those who abound with worldly wealth, if they live in a state of intemperance: but, suppose there was a little pleasure for a few fleeting years, neither the transient pleasure, nor the short space of time which is allotted for human life, can bear any proportion to heavenly and eternal felicity; I say no proportion. Me thinks, that word eternal ought to have a deep and lasting impression on the minds of men, and widely different must its effects be upon the minds of such as are virtuous, and such as are vicious; especially, were the vicious only capable of making serious reflections, and passing a right judgment on their preposterous and enormous follies. What a shocking scene is it to behold men endowed with reasonable souls, and yet busy in exhibiting their ingratitude, and rebellion against God their maker, who hath denounced such dreadful woes against tyrants, oppressors, drunkards, and many other sorts of criminals. Surely intemperance hath weakened great numbers, so far as not to be able to resist the temptations of the diabolical spirit; therefore,

I must again earnestly recommend the prudent use of water to all ranks of people, through life, that they may be the better able to live and die in the fear of God, and in the love of his divine ordinances; Death being a debt that we must all pay. The following, which is taken from a modern book of arts and sciences, seems to shew, that life cannot be expected to subsist for any great duration of time: “as therefore health consists in regular motions of the fluids, together with a proper state of the solids, it is next to a miracle, that so complicated a machine should hold out to extreme old age; for a body such as ours, cannot possibly retain life for ever, which is not difficult to account for, because the membranous fibres of the blood vessels which were made elastic, in order to drive their included juices forward, become gradually harder, and at length rigid; whence they are rendered incapable of executing their offices, and the secretions of the several parts are diminished by degrees; and that this is the case, appears from dissecting of the bodies of very old people, the insides of their arteries being sometimes found ossified here and there, whereby they had almost entirely lost their springiness, and the orifices of the natural ducts are often observed to be quite cartilaginous.”

Human life may, in some measure, be compared to a fire, which, by a regular supply of proper fuel, may be kept in a glowing and pretty equal degree of heat, provided it hath proper vent holes for a supply of fresh air, and to let pass the noxious fumes and filth it endeavours to discharge itself of; but, if the vent holes are partly obstructed the fire will weaken, and if they are totally obstructed

obstructed it will suddenly die, or if too much proper fuel is supplied at a time, it will deaden for a while, or perhaps be choaked and wholly extinguished: if the supply of proper fuel be too little, the fire will fail, and without any supply it must inevitably die. If fuel of a bad quality is thrown on, it will decrease and perhaps die; and should such substances only be thrown on as will not burn, the fire cannot long exist: even so the human body, for if it hath a regular supply of proper food, it may be kept in an even healthy and vigorous state, provided it hath proper vent holes for a supply of fresh air, and to let pass the noxious vapours and excrements it endeavours to discharge; but if the vent holes are partly obstructed, life will weaken; and if they were totally obstructed the consequence would be sudden death: or if too much proper food is taken into the stomach at a time, it weakens life for a while, and sometimes choaks and totally destroys it. If the supply of proper food be too little, life will fail, and without a supply, it will presently vanish away: if diet of a bad quality be taken into the stomach, life will decrease and perhaps perish; and should such substances only be taken into the stomach as cannot be digested, life cannot long exist. Having before observed, the good effects which a heavy atmosphere had on me in the course of my disorder, and having of late lived in a regular state of temperance, which hath enabled me to experience in a high degree its wonderful effects on the human body, I shall insert the following as it agrees with my observations, and hath been produced by ingenious and able men; by which people may be able to learn the times when there
is

is the greatest necessity to wash, brace, strengthen, and help forward the circulation, perspiration, and the secretions, &c. in order to keep the blood and juices pure, and the body in a healthy and vigorous state: “ As it is in the atmosphere that
 “ all plants and animals live and breathe, and as
 “ that appears to be the great principle of most
 “ animal and vegetable productions, alterations,
 “ &c. there does not seem any thing in all philo-
 “ sophy of more immediate concernment to us
 “ than the state of the weather, and a knowledge
 “ of the great influence it has on our bodies,
 “ and the sensible alterations we undergo thereby:
 “ in effect, all living things are only assemblages,
 “ or bundles of vessels, whose juices are kept mov-
 “ ing by the pressure of the atmosphere, and which
 “ by that motion maintains life; so that any alte-
 “ ration in the rarity or density, the heat, puri-
 “ ty, &c. of that, must necessarily be attended
 “ with proportionable ones; in these what vast,
 “ yet regular alterations a little turn of weather
 “ makes in a tube, filled with mercury, or spirit of
 “ wine, or in a piece of string, &c. Every body knows
 “ the common instance of barometers, thermome-
 “ ters, &c. and it is owing partly to our inatten-
 “ tion, and partly to our unequal intemperate
 “ course of living, that we do not feel as great
 “ and regular ones in the tubes, chords, and fibres
 “ of our own bodies. It is certain a great part of
 “ the brute creation, have a sensibility and saga-
 “ city this way beyond mankind, and yet with-
 “ out natural means or disposition thereto more
 “ than we, except that their vessels are regular
 “ barometers, &c. affected only from one external
 “ principle, the disposition of the atmosphere;
 “ whereas

“ whereas ours are acted on by divers, from with-
 “ in as well as without; some of which check,
 “ impede, and prevent the action of others. The
 “ variation of the atmosphere is very apparent,
 “ when there is any alteration in the meteors of the
 “ air for rain, sudden fierce showers, fogs, hail,
 “ snow, lightning, thunder, winds from various
 “ quarters, storms, whirlwinds, drought, &c. are
 “ certain indications, that the atmosphere will
 “ soon become of a different weight. The dif-
 “ ferent season of the year, also produce an almost
 “ incredible variation; hence an infinite number of
 “ effects depending on the action of the air, are in a
 “ perpetual vicissitude and inconstancy: accurate
 “ observations, however, continued almost a century,
 “ have at last enabled us to determine the greatest
 “ and least gravity of the air, known in Europe;
 “ for it hath been found that the greatest weight
 “ of the atmosphere is in equilibrio with 31 inches
 “ of mercury, in the barometer, while the least is
 “ only equal to 27; so the difference is almost
 “ a tenth part of the greatest weight; and be-
 “ tween those limits the variation of the atmo-
 “ sphere’s weight is included. We may therefore
 “ take 29 inches for the mean altitude of the
 “ mercury, and consequently its weight for the
 “ mean weight of a column of air of the same
 “ base: hence the difference of pressure on the
 “ body of a man, allowing it to contain $14\frac{1}{2}$
 “ square feet, will be nearly equal to 3980 pounds
 “ troy; this remarkable difference must greatly
 “ affect the animal functions, and consequently
 “ our health. If a person for instance be asthma-
 “ tical, he will find his disorder increase with
 “ levity of the air; for since a pure dense elastic
 “ air

“ air is alone capable of distending his lungs in
 “ respiration, it will be less capable of performing
 “ the same office when its weight and elasticity
 “ are decreased, and consequently the valetudina-
 “ rian will find his difficulty of breathing increase
 “ in proportion. It is common to consider the
 “ air as heaviest in foggy weather: but, the con-
 “ trary is true, for the air is actually heaviest in
 “ fine clear weather; the reason for this error flows
 “ from our mistaking the cause. When the fibres
 “ and nerves are braced, and constricted by the
 “ great pressure of the air, the blood-vessels act
 “ with their full power and natural vigour, a
 “ proper velocity is given to the fluids, and a
 “ greater momentum to overcome obstructions in
 “ the capillaries: hence we find ourselves alert
 “ and light, and thence fancy that the air is light
 “ also. On the contrary when this pressure is
 “ lessened by near 3980 pounds, the fibres are re-
 “ laxed, the contractile force of the vessels dimi-
 “ nished, a languid circulation ensues, obstructions
 “ &c. happen, and produce agues, fevers, aches,
 “ &c. in some; and in all, a sort of indolence or
 “ gloomy inactivity and heaviness; consequences
 “ which we imagine result from the heaviness of
 “ the air, whereas they, in reality, flow from its
 “ levity.”

It hath been said, that the different seasons
 of the year produce an almost incredible varia-
 tion in the atmosphere; and as a greater weight
 of it raises the quicksilver in the barometer,
 increases the circulation, perspiration, secretions,
 &c. and causes the pulse to beat stronger and lar-
 ger, I shall here insert the words of an able author,
 respecting the variation of the pulse, in the dif-
 ferent seasons of the year, &c. “ when after the

“ pre-

“predominancy of a west or south wind, it be-
 “comes north or east, the pulse is stronger and
 “larger, as also, when the quicksilver rises in the
 “barometer. But, when the atmosphere is
 “light, humid, rainy, with a long south wind;
 “as also, where the life is sedentary, the sleep long,
 “and the season autumnal, the pulse is languid and
 “small, and the perspiration decreased. In May it
 “is great and sometimes violent; in the middle of
 “summer quick but weak; in autumn slow, soft and
 “weak; in the winter hard and great. A drastic
 “purge and an emetic, render the pulse hard quick
 “and weak, with loss of strength; chalybeats
 “render it great and robust; opiates and the like,
 “render it small and weak, and decrease the elastici-
 “ty of the solids.” Now it appears from what has
 been said, that changes in the atmosphere has
 exceeding powerful effects on the human body,
 and that there is the greatest necessity to wash
 often in the autum, the summer, and in all other sea-
 sons of the year, when there is fogs, moist, and
 rainy weather, or in other words, when the baro-
 meter continues low for the season of the year;
 and particularly when a chronic disease, grief,
 sorrow or sadness, renders the pulses slow and
 weak; which things point out a languid circulation.
 It hath lately been urged, that here does not seem
 any thing in all philosophy of more immediate
 concernment to us, than the state of the weather,
 and a knowledge of the great influence it has on
 our human bodies, and the sensible alterations we
 undergo thereby; but Dr Williams, as I have be-
 fore observed, hath informed us, “that those who
 “use cold bathing frequently are little effected
 “with the changes of the weather; and from my
 own

own experience, and the observations I have made on the natives of India, I dare venture to affirm, that washing frequently will have as good an effect in regard to fortifying the body against the changes which happen in the atmosphere and weather." In another place it hath lately been said, " When the fibres and nerves are braced and constringed by the great pressure of the air, the blood vessels act with their full power and natural vigour, a proper velocity is given to the fluids, and a greater momentum to overcome obstructions in the capillaries. Hence we find ourselves alert and light; on the contrary, when this pressure is lessened by near 39.80 pounds, the fibres are relaxed, the contractile force of the vessels diminished, a languid circulation ensues, obstructions, &c. happen, and produce agues, fevers, aches, &c. in some, and in all a sort of indolence or gloomy inactivity and heaviness." Now, by the above, it seems a regulator is wanted to keep the human body and mind in health and vigour, and pure water above all other medicines will best supply that purpose; for it will not only prevent obstructions from forming in the time of a light atmosphere, but remove such as are formed, if not very obstinate ones. Thus the prudent use of pure water may be of more service to mankind than all the distilled spirits and fermented liquors, produced from grapes and corn, notwithstanding they are acquired at such an enormous expence. I have already observed, that Dr Cadogan tells us, " the stomach wants wine no more than the nose

M " does

“ does snuff, and that water is the element that dilutes and carries off crudities and indigestions.” These truths are confirmed to me by my own experience; and the water which is taken into the stomach ought doubtless to be as pure as can be got.

Cautions to be observed in regard to Washing.

BEFORE I proceed to explain the method of washing, which I think most convenient, it may be requisite to caution people not to indulge themselves in washing with water which is even so warm as new milk; for this would have just the contrary effects of the water which I have indicated should be such only as is not disagreeably cold, and would relax instead of bracing, especially were the ambient air as warm as in the heat of summer. It is well known, that warm baths, vapour baths, &c. never fail to relax and weaken the body, and open the pores of the skin, &c. too wide, by which conduct the circulation becomes languid, and the body rendered subject to catch cold on the slightest occasions: therefore the consequence of using warm water would be letting in diseases upon the body, instead of fortifying it against their attacks, which would be quite wrong. However, as a temporary relief in cases of pains and oppressions of the head and breast, &c. is often obtained from a partial use of the warm bath, I shall insert the following, which is taken from a modern Dictionary of Arts and Sciences. “ Bathing the feet in warm water is highly expedient for the purposes of derivation in those diseases which arise from congestions of the humours to
“ the

“ the head and breast, produced by spasms of the
 “ inferior parts, and especially of the hypochon-
 “ dria. Amongst this kind, besides lethargic dis-
 “ eases, we may reckon almost all disorders of the
 “ head, such as madness, melancholy, cephalæas,
 “ hemicranias, the claves hystericus, vertigos,
 “ tooth-achs, pains of the ears, a gutta rosacea;
 “ inflammations and defluxions of saline humours
 “ on the eyes, immoderate hæmorrhages from the
 “ nose, and long watchings. Of this kind are also
 “ some disorders which affect the breast, such as
 “ convulsive asthmas, dyspnoeas arising from a
 “ plethora, palpitations of the heart, dry coughs,
 “ and spittings of blood. Besides, baths for the
 “ feet, in consequence of their singular efficacy in
 “ relaxing spasms, are highly beneficial in spasmo-
 “ dic and convulsive disorders, in pains, cardial-
 “ gias, colics, especially of the hæmorrhoidal kind,
 “ gripes produced by the stone, and inflations of
 “ the stomach. It is to be observed, that bathing
 “ the feet produces more happy effects if before it
 “ is used the quantity of blood is lessened by vene-
 “ section in the foot: it should be used about bed-
 “ time, and the feet kept warm till the patient
 “ goes to bed, by which means perspiration all
 “ over the body is increased. This bath may either
 “ consist of light pure water alone, or to correct
 “ the qualities of heavy and hard water, a lixivium,
 “ or bran of wheat, or chamomile flowers, may be
 “ added.” The water which is used for this pur-
 pose should never be warmer than new milk, other-
 wise it will do harm. Three minutes is time suf-
 ficient for the feet to continue in it, and when ta-
 ken out they should be immediately wiped dry
 with a clean linen cloth. The above operation is

only temporary work, as it doth seldom either prevent or cure diseases, and as it leaves the body relaxed in some degree, it renders it more liable to catch cold; however, where it will give relief in cases attended with great pain, &c. it is certainly of good service, and much safer than opiates, and the like: but to return to the preventing and curing of diseases, &c. It is well known to people who have gone through a course of cold bathing, that the first and second times of going into the water have generally proved disagreeable, the reason of which is owing to the pores of the skin (which are not obstructed) being gaping too wide, by which means the cold water causes an unpleasant sensation; but afterwards going into the water becomes more agreeable, owing to the pores of the skin being contracted into their natural size and state. And were people, at their first beginning to wash, to use such water as is generally employed for cold bathing, many of them, especially such as are relaxed, would find the same disagreeableness at the first; which would when continued become more agreeable, for the same reasons given above; but people may begin a course of washing with water which is not disagreeably cold to them, and as it fortifies their body by reducing the pores of their skin to their natural size and state, the practice of washing will continue agreeable, although they use the water by degrees somewhat colder.

The METHOD of WASHING.

I Would recommend to tender people, and such as do not care to have their floors wetted, as follows: In the first place, let well seasoned boards
be

be firmly joined together, in the form of a right-angled parallelogram, or long square, in length three feet eight inches, in breadth two feet ten inches; let it have a ledge upon the sides and ends two inches high, and let its joints be calked, so that it may hold water. Near the centre fix with nails, drove over head, long slices of cork, half an inch thick, and not too close together, nor yet so open but that they may be easy to stand on bare-footed; let the pieces of cork spread the compass of twenty-two inches by twenty, and the longer side of the cork extend crossways, and at right angles over the plank. Provide a clean tin vessel to contain the water for washing; its depth about eight inches, and its diameter seven and a half. Provide likewise a pretty large coarse clean and dry towel, to wipe the body with. Let the water which is used in washing be the purest that can be got; and when there is occasion to decrease its cold, let a little be heated in a clean vessel, which is to be mixed with the rest of the water, having at hand other pure water, in order to attemperate the water intended for washing: but let it be observed, that the water which is heated must be put in a vessel which will prevent its being in the least tinged with smoke. Three quarts of water will be a sufficient quantity for the purpose of washing. The hands being but small parts, and kept constantly naked, are liable to great variations with respect to heat and cold, and making use of them to find the temperature of the water will not be so certain as using a sponge soaked in the water for use, out of which may be pressed water upon the shoulder, thigh, or other massy parts of the body, whereby the determinate temperature

of the water may be tolerably acquired at any season of the year. But such as would be very nice, and affix certain degrees of temperament to the water, agreeable to the seasons of the year, &c. may make use of a good thermometer, which may be easily adapted to that purpose. As in cold bathing, so in washing, the body should not be overheated at the time the operation is performed, nor should it be done near a fire, but in a room where the air is pretty still, and not mixed with smoke, damp, or any other noxious effluvia ; and the room should be moderately cool for the season of the year, so that there will seldom be occasion to use fire in the room at the time of washing. I would recommend to tender people, who are subject to have their blood, humours, vapours, &c. to fly into their heads when they prepare for washing, to strip off their lower garments last, and put them on first after the process is finished. The water may be taken out of the vessel upon the parts of the body plentifully with the hands, when their insides are put into a concave form, and the hands are the best adapted for the purpose of washing and rubbing the skin. Every part of the surface of the body should be washed, and that near as much as is commonly used for the hands and face. The operation ought to be carried on with great speed, in a standing posture, beginning with the hands first, then in their turns, the head, neck, shoulders, back, loins, breast, belly, and sides, and regularly downwards, not forgetting the arms and soles of the feet, which will require the most washing, and should be done quickly if in a sitting posture. The parts joining the loins, will be best done in a stooping posture ; and washing
the

the anus, and parts adjoining, in the posture of going to stool, and in this part of the operation one hand is to supply the other with water, that the water in the vessel may be kept clean. If the hands are not pliable, a sponge will answer to wash the tops and sides of the feet. In order to wash the shoulders, back, and loins, an instrument should be provided, somewhat like the form of the printed capital L ; its longer part two feet seven inches, the shorter part from end to end seven and a half inches in length, with a brush fixed upon the extreme end of the shorter piece, the back of the brush forming an angle with it of about fifty-five degrees ; the length of the brush three inches and a half, its breadth two and a half, to be made of wood and hair, and equal in strength to a common flesh brush. The whole of the brush should be dipped in water, that it may hold a good quantity at a time ; then the brush to be raised quickly over the head, and applied to wash the shoulders, back, and loins, which may be done by holding the longer part of the instrument in the hands, one hand having hold of it some height above the head, the other keeping hold a convenient distance lower, by which means the brush may be rubbed briskly upon the skin, upwards and downwards, sideways, &c. Wiping the back and shoulders may be performed by keeping hold of the towel with the hands, a good distance apart from each other, and drawing the towel up and down the back and shoulders, and then obliquely across them, &c. And thus a person, after a little practice, will be able to go through the process with alacrity. As with cold bathing, so with washing, the operation should be

be performed when the stomach is near empty; after which exercise, or a warm bed, will be proper: therefore those whose employments are sedentary, and who cannot afford time for exercise, may take supper early, and wash immediately before going to bed; but such as have it in their power to take enough of exercise, may wash an hour before breakfast, dinner, or supper, or at going to bed; however, the morning is by some reckoned the best time for cold bathing. I have used all the different times above mentioned, for washing, and think if any deserve the preference, it is the morning, and at going to bed; the latter of which seems the most proper time for children, as some may not be able, and others neglect to take enough of exercise immediately after.

Of WATER considered in respect of DIET.

MY next purpose is to say something with respect to the necessity there is for people to make a proper choice of water for diet, and point out means whereby to enable them to provide better water than is generally used, &c. notwithstanding many very able philosophers and physicians have expatiated largely on the powerful and salubrious effects good water has in the animal oeconomy; and on the other hand, have represented, with perspicuity, and the most undeniable proofs, the direful, and fatal consequences produced from the long continued use of bad water. I say, when these things are maturely consider'd, it is not a little surprising to observe the indifference and inattention which people pay in common, to the choice of water, the predominant
cause

cause of which may be attributed to a defect in the intellects, occasioned by intemperance, and the slow and imperceptible effects good and bad water have in mending or destroying the constitution. But with the temperate and affable East Indians, the case is just the reverse; they pay the strictest regard to cleanliness, and the purity of their water: the immense labour, and expence which they have been at, in forming their regular and extensive reservoirs, and the cleanly order in which they are kept, bespeak the high esteem they have for good water; but here they do not stop: they extend their charity to the thirsty stranger, and the weary traveller; having dug large wells at convenient distances upon the sides of the parched roads, merely for their refreshment; they go still further, and are charitable even to their enemies, in many instances, one of which I shall mention. An Indian merchant at Bombay, after having been extremely ill treated by the company's servants, left, at his decease, effects, the interest of which, according to his will is appropriated to defray the expence of supplying the Europeans with good water to drink, which water was ordered to be the best that could be conveniently procured, and served out to them ready boiled, in the most public part of the garrison, (notwithstanding fuel is very dear in that part) which practice was in being when I left that place. I hope my reader will excuse this digression, or any other he may meet with in this work, they being all, in some measure or other, designed for the general good of mankind. Properly speaking, there is no such thing as bad water, it is the foreign or extraneous matter contained in most waters, which make it hurtful to the body,

but

but as water is generally distinguished by its own effects, &c. into good and bad, I shall conform henceforward to the same terms. It is somewhat difficult, to determine as to the purity of the water. The eye is no adequate judge on this occasion. It will teach us, indeed, not to use foul or dirty water, which would carry mud, and a multitude of other things, we never ought or intended to swallow into our stomachs; but it leaves us in the dark, as to those contents of water, which in however great quantity may be suspended imperceptibly in it, (in this cause we are to judge by the effects of the water); for as the various kinds of salts, spars, minute granules of crystal, sand, &c. are pellucid, make no appearance when suspended in it; nevertheless, their slow and imperceptible effects, on the human body, are by the accounts of the ablest writers on this subject, generally prejudicial, and destructive to health; and altho' there be some particular springs very good, yet the generality of them are the least fit for diet of any water, except such as betray themselves by a dirty colour or loathsome taste. The above hard water is always more or less impregnated with particles of earth. Now the granules of sand, spar, &c. obstruct the glands, the exquisite fine vessels, &c. and the fine particles of earth may be supposed to increase the obstructions, as they can scarce fail, in the course of circulation, to stop the passages, which are by the sharp pointed and indissoluble substances, rendered almost close. Thus the natural secretions are hindered, and also the circulation in the capillaries, &c. which induce numberless chronic diseases, &c. for altho' the human
body

body is most wonderfully framed, and made to endure great changes, yet we find nothing is more common than for obstructions to form in various parts of the body, the most noble parts not excepted. Dr Williams acquaints us, “that the pineal gland, (which is seated in the brain) hath often been found to contain gravel.”

Now as men are endowed with reasonable souls, and forbid to take away or even shorten life, certainly they ought to be more circumspect in regard to such substances as are taken into the body; and there is little doubt but that the Europeans, as well as the Indians, certainly would, were it not for some particular reasons before mentioned, viz. a deprivation of the reasoning faculties, occasioned by intemperance, &c. This detestible evil, the invention of satan, hath brought upon multitudes such a weakness, and high degree of folly, and pride, that they hold sound reasoning or study in the greatest contempt; and why? 'Tis, because they themselves are inadequate, and in no condition to enter upon such noble acts. “The man, says Seneca, who thinks himself above studying, is in effect beneath every thing; and neither fit for civil society on earth, nor immortal happiness hereafter.” But to return from this digression.

OF SNOW WATER.

“**B**OERHAAVE is lavish in his encomium on snow water, which he prefers to all others; but he advises it to be collected carefully, from the tops of high sandy mountains, at a distance from any towns or houses, that it may not be tainted with any smoke, or other impurities. He likewise prefers such as has fallen after a long sharp frost,
“in

“ in calm weather, and takes only the top of it. He
 “ supposes this snow to produce the purest water
 “ that art or nature can furnish us with, that
 “ scarcely any salt, air, oil, or other mixture will
 “ be found in it; that it really differs from all other
 “ water; that it is the purest of all, quite immu-
 “ table, may be kept for years, and is a singular
 “ remedy for inflammations of the eyes.”* This
 is agreeable to Dr Rutty’s account, who collected
 the snow water which he analysed in February,
 after the great frost in 1739, and followed Boer-
 haave’s precautions as nearly as his situation would
 permit him to do. A gallon of this water left,
 upon evaporation only, four grains of a light
 brown sediment, consisting of marine salt, absor-
 bent earth, and a pittance of sulphur †.

Dr Williams tells us, “ that the water pro-
 “ duced from melted snow is superior to all other
 “ kinds in regard to purity; all waters, as they are
 “ more pure, are more soft in general; the above,
 “ as the purest, is the softest of all. Rain water
 “ comes next to this; but, both by experiments and
 “ analysis, is found to be inferior to it; after rain
 “ water, those waters are the softest which are
 “ most formed of this, except when altered for
 “ the worse, by stagnation, or other accidents.
 “ Spring water,” says he, “ although the clearest
 “ and most tempting of all to look at, is the least
 “ pure, and of all others the least fit for common
 “ use; and consequently the other waters we meet
 “ with, which are all compounded of a mixture
 “ of spring and rain-water, are the better and
 “ fitter for all the purposes of life, as they con-
 “ tain

* Boerhaave’s Chem. vol. 1. p. 601.

† Synops. p. 40. table [EE]

"tain more of the rain water, and less of the other.
 "Such water as sits lightest upon the stomach is to
 "be preferred to that which is heavy there. It
 "should have no sensible quality but that of mere
 "water on the body." The ingenious Dr Rothe-
 ram says, "that water is the fittest for general
 "use which is the purest and most free from all
 "heterogeneous particles, or unmixed with any
 "foreign substance, whether of the animal, ve-
 "getable, or mineral kind. An absolute pure and
 "unmixed elementary water, we can indeed
 "scarcely procure; for whatever bodies it meets
 "with it will generally carry some particles of
 "them along with it, and more especially if it
 "comes into contact with any of those salts which
 "are plentifully dispersed through the animal,
 "vegetable, and mineral kingdoms; even in pas-
 "sing through the air it will attract some par-
 "ticles which change its property, and whatever
 "vessels we keep it in we generally find a sensible
 "change. We must therefore be content with
 "that which contains the fewest of the heteroge-
 "neous parts, and those of the most inoffensive
 "kind, i. e. such as give the least hindrance or
 "disturbance to its natural operations, more espe-
 "cially such as may be injurious to the animal
 "body, or work any change in the human con-
 "stitution. This, in supplying large towns, is a
 "consideration of great importance; for these sub-
 "stances are often so small in quantity, that they
 "operate by slow and imperceptible degrees*,
 "and their effects by this means may escape the
 "nicest observation; yet by long and constant per-
 "severance they may become very prejudicial, if
 "not destructive."

N The

* See Dr Percival on the Waters of Manchester.

The very able physician and philosopher Hoffman says *, “ that as water is properly reckoned
 “ by philosophers amongst the elements, so its
 “ extensive use appears through all the works of
 “ nature: for water is that universal solvent
 “ which divides and tears in pieces the solid parts
 “ of every kind, imbibes, and carries them away
 “ with itself. From hence we are furnished with
 “ a cause for the various changes in nature; for
 “ without water no fertility, nutrition, nor in-
 “ crease, can take place in the regions of nature.
 “ Without water no animals live, nor circu-
 “ lation of the blood and humours in the vessels,
 “ no secretions nor excretions of what is useless,
 “ can be effected. If solid bodies, or metals, mi-
 “ nerals, or stones, are to be dissolved, the help
 “ of water is necessary. We see no putrefaction
 “ nor corruption without moisture; nor can re-
 “ medies operate upon human bodies, nor fluids
 “ act upon solids, but by means of water. Our
 “ dry and solid food without fluids would be de-
 “ prived of all its use and benefit.”

The great philosopher and friend to mankind, the excellent Mr Boyle, found such a variety of different minerals, and some of them very mischievous ones, to lurk imperceptibly in different waters (particularly in spring water), that he says, “ it is only by long experience and observa-
 “ tion that we can be satisfied of their salubrity.
 “ Even poisons of the most pernicious kind have
 “ been known by experience to be contained in
 “ mineral waters, which were yet so subtle, that
 “ the

* Observat. Physico. Chemic. lib. 2. obs. 7.

" the nicest chemical analysis could not discover
 " them *." " About two league's from Pader-
 " born, in Germany, is a treble spring, called
 " Methorn, which has three streams, one of which
 " holds much orpiment, &c. Some of this water
 " being carried home, was given to hens after they
 " had eaten oats, barley, and bread crumbs, and
 " soon after they had drank of it they became
 " giddy, reeled, and tumbled upon their backs,
 " with convulsion fits, and died with a great ex-
 " tension of their legs; giving them common
 " salt, after they had drank, they died not so soon;
 " giving them vinegar, they died not at all, but
 " in seven or eight days after were troubled with
 " the pipp." Lowthorp's Abridgement of the Phi-
 losoph. Transf. vol. 2. p. 331. In Alston-moor,
 Hexhamshire, and many other places, it is well
 known that no poultry can live near the washings
 of the lead ore; and this is generally supposed to
 be owing to the spars, crystals, or marcasites,
 which are washed away from the ore, and either
 picked up by the fowls in substance, or taken in
 by the water impregnated with them.

This water is known to injure, or destroy horses,
 or other cattle, which are unwarily allowed to drink
 of it; and though experience has taught the inha-
 bitants to keep their cattle pretty much from it,
 yet misfortunes sometimes happen sufficient to keep
 these effects within observation and memory.
 The inhabitants at the feet of the Pyrenees and
 Alps, as also those in the Black-forest, Switzerland,
 and Triol, are troubled with glandular, tumors
 N 2 and

* Vide Hoffman de Venenis.

and swellings of the throat, &c. which modern authors attribute to the hardness and impurity which the water acquires in its descent from the hills. It is likewise from the large quantity of stony matter, which the hard waters generally contain, that most of them leave large incrustations upon the sides of vessels, in which they are boiled, as tea kettles &c. The waters of Gambroon, in Persia, produced in the flesh of such people as used it, extraordinary long worms, which induced the inhabitants to fetch other water at the distance of five leagues. The waters near Couchin, in India, abound with a bad quality, and caused such as used them to have their legs and ancles swelled to an extraordinary thickness, which occasioned the people to fetch other water in boats from Verapoli, at five leagues distance; whilst the Europeans at Napagatam, in India, used the water adjoining that place, their hospital was crowded with diseased patients; but in a little time after they had changed the water for a better kind, which was procured at twelve miles distance, they enjoyed a much better state of health. We find by the authorities of able physicians, that, in Europe, many tedious and fatal diseases, are occasioned by the long continued use of bad water, such as malignant putrid fevers, miliary fevers, the epidemical diarrhoea, or looseness, the scrophula or king's evil, the palsy, the stone and gravel, the scurvy, the hysteric diseases, and many other nervous ones, worms, the diabetes, &c. And, as bad water is known to generate obstructions, little doubt remains but that it will contribute its share to the production of a number of other chronic diseases. The surprising difference
betwixt

betwixt the effects of good and bad water, on the human constitution, is a thing of extraordinary great importance, and deserves the most serious attention; for it is well known, that the internal use of pure water will cure obstinate diseases, which are often occasioned by the use of impure or bad water. The waters of Malvern are an incontestible proof of this in scrophulous and leprous cases, in which they have been so successful as to astonish their ingenious and worthy patron himself, who can assign no other reason for their wonderful operations, but their extreme purity, which is superior to any hitherto known. Now from the above account of the destructive effects of bad water, and the salubrious effects of good, one might reasonably conclude that nothing more need be said to induce even indolent people to refrain from grovelling up such water, as manifest itself to be of a bad quality, if they had the right use of their reason; but it seems impure waters, which form obstructions, &c. will prevent the regular secretions in the glands, circulation in the infinitely fine vessels, &c. and probably cause a defect in the animal spirits, or their passages, which may render them less capable of co-operating with the soul, and in some measures deprave the reasoning faculty.

It is through the particular disposition of a people, which have been attentively observed for some years, and who use a particular kind of bad water, which gives me some reason to suspect the above; but of this I shall speak more at large hereafter. There are not wanting drunkards, and others, who are in love with artificial drink, which give water the appellation of rot-gut; and I know not how many other opprobrious names. They pretend too, that when water of a bad quality is made into beer,

ale, &c. it renders it wholesome ; but just the contrary is true, especially if the water is impregnated with stoney particles, for then they are covered with a glutinous substance, and are liable to cause obstructions, even in the kidneys, as well as the other finer parts; but drunkards are generally ready to make some excuse, in order to screen their extravagance and brutality. One test of the purity of water, is, that it be entirely free from any particular taste or smell, that it be perfectly insipid, otherwise we may safely conclude that it is impure ; it ought likewise to be perfectly limpid, bright, and transparent. Indeed, several good waters, and especially the river ones, will be muddy and opake, as will be observed afterwards; but this can scarcely be called an imperfection, if they subside, and become clear, upon standing; but whatever water shews any particular colour, is certainly impure.

OF RAIN WATER.

DR Rotheram says, “ rain water is, properly speaking, distilled by nature;” and though, for reasons, which I shall assign presently, it falls a little short of common distilled water in purity, yet when properly collected, and well preserved, it is of excellent use, and scarcely inferior to any natural water, which we know. Boerhave calls rain water, the Lixivium of the air, and says, “ that, in passing through the atmosphere, it collects and incorporates with various bodies “ which fall in its way, as salts, spirits, oils, soaps, “ earths, and metals themselves, all which may “ be raised by different exhalations into the air, “ and unite with the aqueous particles in different
“ pro-

" proportions, according to the soil, climate,
 " or various seasons in which they are ob-
 " served: hence the different degrees of heat,
 " and cold, the different winds, meteors, thun-
 " der, the smoke of furnaces, and culinary
 " fires, severally contribute to change the pro-
 " perties of rain water. In summer time par-
 " ticularly, it brings along with it the seeds and
 " embryos of vegetables, and animalculæ, which
 " renders it disagreeable to the taste, and promote
 " its putrefaction." If it be kept in wooden vessels,
 it will soon stink, and become unfit for use; and
 then if it be viewed by a microscope, it is found to
 contain an amazing number of various animalculæ,
 and particularly those which from their form and
 motion, are called the wheel animals.* These ani-
 malculæ are supposed to be the chief cause of the
 water's putrefaction; and therefore Boerhaave and
 others recommend the boiling of it, which will in-
 stantly destroy these animals, whether they be per-
 fectly formed, or only in embryo. Rain water is
 likewise observed to be a little hard, when it first
 falls;† and it hath frequently been observed to
 cruddle with soap, and turn rather milky with
 sugar of lead, when it is newly fallen; but in two
 or three days it becomes perfectly soft. The rain
 which falls through the smoke of large towns, is
 rendered foul and black, more especially if it be
 collected, as it generally is, from the roofs of
 houses, when it brings with it a great many par-
 ticles of soot, which gives it a very disagreeable
 taste, and colour, and renders it unfit for almost

any
 * Baker's Microscope Made Easy; p. 83, and Employment
 for the Microscope, p. 295.

† Ruttty's Synopsis, p. 28.

any domestic purposes. Notwithstanding all this, it is known that when rain water is properly treated, it is exceedingly pure and good; and in taste, colour, and fluidity, is scarcely inferior to any other water. "When water of any kind is kept in wooden vessels, it contracts a particular smell, taste, and colour from the wood; and vessels, for this purpose, being generally made of oak, they may when new, give the water some degree of astringency. Therefore clean earthen vessels are the best, though I apprehend leaden ones may be used with tolerable safety, if they be kept clear from vegetable acids, all of which are found to corrode lead, and to produce a very noxious salt."

Dr Ruttty observes, that "rain water, upon standing, deposits a sediment nearly the same, both in quantity and quality, with that which is obtained by the gentlest evaporation, which is a convincing proof of its purity, after subsiding; for, as this sagacious naturalist very justly observes, the contents are more loosely adherent, or less intimately dissolved, in rain water than divers others." For its specific gravity, after repeated trials, have not been found to differ from that of distilled water, more than one hundred thousandth part of the whole, though distilled in large glass vessels, and with a very gentle heat. From six different specimens of rain water, Dr Ruttty produced from 6 to 12 grains of residuum to a gallon for the most part of a dark brown colour, with some particles of white interspersed, of a bitter brackish, and sometimes lixivial taste, and disagreeable smell. From several experiments he concludes, that this residuum is composed of calcareous nitre, marine salt, sulphur, and absorbent

forbent earth, each of which ingredients must be contained in very small quantities: and when we consider that the water thus analysed, was not previously depurated by subsiding or filtering, we may rest pretty well satisfied, that rain water properly managed, will approach as near to a perfect, unmixed element, as we can reasonably desire, and will scarcely be exceeded by any which we can procure, excepting perhaps those from snow and hail; which as they commonly fall in colder climates, and colder seasons, may be less affected with those impurities which are occasioned by heat, or from very uncommon springs; for some there are extraordinary pure, which must be owing to the nature of the earth, which the water filters through.

OF RIVER WATER.

AS rivers are chiefly composed of waters from different springs, they might be expected in some measure to partake of the properties of those springs and rivulets which run into them. The different soils or beds through which they run may likewise communicate some part of their contents to the water, and hence we find that the waters of some rivers have different properties; those of the Seine at Paris, for instance, are purgative, especially to strangers; the same is observed of the Nile, at Cairo. Add to this the number of fishes, and other animals, the leaves, bark, and roots of trees, with a variety of vegetable substances which are found in most rivers; and near large and populous towns the quantities of filth, and heterogeneous substances which are mixed with them; when we consider all this, we are naturally led to
 imagine

imagine that river water would generally be very impure; yet nature generally provides a remedy against all these inconveniences; and it is a great instance of the goodness of providence, that those waters which are most in quantity, the easiest obtained, and most generally used, are rendered by the course of nature the most beneficial, and are best adapted to our health and convenience. For river waters do in a wonderful manner very soon free themselves from most of their impurities; they are, in this respect, similar to rain water, which indeed makes a considerable part of their composition, that they naturally drop their sediment, and are thus disposed to a spontaneous analysis, that if the water in a river were poisoned in one place, able judges make little doubt but that in a very little running in its channel, it might become good and wholesome. Though we may not fully comprehend all the means by which rivers thus purify themselves in their courses, yet the following may deserve our consideration: Dr Rotheram says, “ the motion of the current contributes to “ this effect. No water which is kept in motion “ will putrefy; and the continued agitation of the “ parts, and their collisions against one another, “ often dispose them to separate, and those mineral ones, which naturally attract one another, “ are by these means collected together, and by “ their specific gravity deposited.”

Hence the waters in the most rapid rivers are said to be comparatively light and pure, instances of which are given in those of the Rhine and Rhone, which are very rapid moving rivers, and have their waters lighter and purer than those of
many

many others *. The absorption by the bed or channel of the river, whether this be sand, marel, gravel, clay, or almost any other soil, will attract many of the salts, and other mineral, animal, and vegetable substances, and disunite them from the water. The finer the mud is the smaller the particles are into which it is divided, and the more intimately and uniformly it is distributed through the water, it will more effectually search every part of it, catch hold of whatever comes in its way, and carry it to the sides and bottom : and hence the waters of the muddiest rivers, after they have properly subsided in cisterns, or reservoirs, are often the purest and brightest. In the course of water through the channels of rivers the sun and air have a considerable effect in rendering it more pure. If water be a little hard, it is well known to become softer by being exposed to the sun and air : by what mechanical operation this is effected, or how it can be accounted for, may afford matter of some dispute ; perhaps the heat may contribute not a little towards it, for we see some waters which are loaden with contents that will deposite a great part of them, especially of the earthy ones, upon being moderately warmed ; and it is probable upon this account that some waters become softer, milder, and more agreeable upon boiling, by dropping those earthy, or calcareous parts, which were rather suspended than dissolved in them †. But such waters as are loaded with fixed salts, will generally be found more

* Rutty's Synops, p. 15.

† Percival's exper. and observa, p. 27.

more strongly impregnated, after boiling; upon this account those rivers which take the longest course, are thought to afford the best water, as they are more and longer exposed to the sun and air, so that the water of the Ganges, has by some been reputed the best in the world; and upon this account it is said, the Eastern monarchs have been at the expence of carrying it to a very great distance. To this cause Prosper Alpinus attributes, in a great measure, the superior excellence, and purity, of the river Nile*; which river, taking its rise under the tropic of Capricorn, and running through the whole breadth of the torrid Zone, empties itself into the Mediterranean, in the latitude of about 32 degrees north, during which long, and warm course, it precepitates its contents, is attenuated, and cleared of all its impurities. Dr Rotheram of Newcastle says, “ the river Tyne rises from different sources, some of them from about sixty miles north-west from this town, and others about fifty to the west, and south-west, from this town; and from thence, to its entrance into the sea, at Tinemouth, is about ten miles; but if we measure from the windings, it may be more in both cases, so that its several branches spread over a very large tract of country, the greatest part of which abounds with collieries and lead-mines, from the numerous levels and engines of which, immense quantities of water are constantly flowing in, that we should be much within compass, if we asserted, that above half the water which runs by Newcastle, comes from the mines

* Med. Egypt, lib. 1. cap. 10.

“ mines; and sometimes the waters above men-
 “ tioned will be suddenly let off in very large
 “ quantities, or what the workmen call hushes,
 “ and will apparently discolour the river for a
 “ considerable space; yet so readily and entirely
 “ does the river clear itself from any impurities
 “ which it might be supposed to contract from
 “ hence, that I have never been able to discover
 “ the least particle of any vitriolic, or other sub-
 “ stances, which are to be found in coal water,
 “ though I have repeatedly and very carefully ex-
 “ amined it at different seasons of the year, and
 “ at different times of the tide.” He says like-
 wise, “ that the Tyne water in the neighbour-
 “ hood of Newcastle is pure and good, and is
 “ known to keep exceedingly good and sweet thro’
 “ long voyages, as it hath been frequently carried
 “ to North America.” It is needless to say any
 thing in praise of the Thames water, as it is known
 to be extraordinary good by the people in most
 maritime parts of the world, notwithstanding the
 vast quantities of filth which drain into it, and its
 turbid appearance: however, it must be much
 better for diet when it hath had time to subside.
 As I have experienced the good and bad effects of
 pure and impure water, in the course of diet, in a
 pretty high degree, and being convinced that there
 are great numbers of people who, through a mis-
 taken notion, prefer spring water to that of river,
 I have dwelt the longer upon river water, in order
 to shew that it is in general exceeding good, after
 it hath had three or four days time to subside in;
 and the expence of a few earthen vessels to con-
 tain it cannot be great.

OF STAGNANT WATER.

THE stagnant waters in lakes, ponds, and ditches, are generally esteemed the worst; and by the experiments of Hoffman and Boerhaave they appear to be specifically the heaviest: but we must be cautious of drawing too general inferences, even from the reports of these two great men; for Hoffman tried the specific gravity of the marsh water, taken out of the town ditch at Hall, by an hydrometer, which, he tells us, exceeded the common ones*. And Boerhaave draws his conclusions from the lake of Harlem†. Both these waters are very impure; for that at Hall was full of insects, and contained a great quantity of alkaline salt; and Boerhaave tells us, “that all
 “the dirt and filth from the populous city of Ley-
 “den, besides the myriads of pounds of dying
 “stuff, alum, tartar, vitriol, &c. which are mixed
 “with water and thrown out in whole floods
 “from the dyers vessels, are all emptied into
 “the lake at Harlem;” and the perfection to which several colours are brought at Leyden, he ascribes to this particular water, “because,” he says, “that the dying of those colours has been
 “in vain attempted in other places, though by the
 “same workmen, and after the same manner.” It is evident from these accounts that both these waters have something peculiar in them, and that from their specific gravity no general conclusion can fairly be drawn. Dr Rotheram says, “the
 “water

* Observat. Physico. Chymic. lib. 2. Obs. 7.

† Element. Chem. vol. 1. p. 612.

“ water in some of our lakes in this island is, I
 “ apprehend, as pure and good as most of what
 “ we shall find elsewhere. I pretend not indeed
 “ to have analysed many of them, nor even to
 “ have tried their specific gravity, but I remem-
 “ ber well to have drank of the waters in Winan-
 “ der-mere, Ulf-water, and others of our large
 “ lakes in Westmoreland and Cumberland, and
 “ have found them very soft and good : And I look
 “ upon it to be a strong proof of their salubrity,
 “ that fishes, of various kinds, are caught in as
 “ high perfection in the two lakes above men-
 “ tioned as any where in the world ; for besides
 “ the numbers of that beautiful and elegant fish,
 “ the charr, which are annually taken out of
 “ them, and almost peculiar to them, I believe
 “ they may challenge the world to produce finer
 “ trout, perch, or any other fish which they may
 “ contain : and the purity of water will be allowed
 “ to be as necessary to the health of these animals,
 “ as that of the air is to ours.” There are many
 lakes in Cumberland which the Doctor hath not na-
 med, particularly three, which are situate about
 three miles from each other, extending in a right
 line from the south-east to the north-west, and are
 known by the names of Withburn-water, Darwent-
 water, and Basinthwaite-water. Withburn-water is
 the least, and in compass near one square mile ; Dar-
 went is situate in that delightful and much admi-
 red valley in which Kefwick stands. They all re-
 ceive and emit running waters, and that perhaps,
 on an average, at about the rate of their whole
 contents in the space of a month in the summer sea-
 son. Their waters appear to be all of one quality,
 and are exceeding soft and sweet, notwithstanding

two of them are supplied in part with many small rills, which trickle down the steep sides of the adjacent rugged and lofty mountains, which were in ancient times plentifully stored with mineral substances, such as the common lead ore, copper ore; and there are still vast quantities of marcasites, &c. which impregnate the waters that issue out of the old mines with poisonous substances; and although some of the mines are so near the Darwent side, that their noxious contents cannot be supposed to subside in their short course to the lake; yet the power of the sun and winds, by rarefying and agitating the lake, seem to make room sufficient to let the poisonous particles precipitate to the bottom, as there are no dead or sickly fishes found near the influx of the mineral waters, or in any other part of the lake, except such fishes as may have escaped from the jaws of the voracious pike, or large perch. The three lakes abound with one and the same kind of fishes, such as pikes, trouts, perches, and other sorts, which are all caught in high perfection, and excellent in their different kinds; but they contain no charr, which is said to be owing to the presence of the devouring pike. The three lakes seem all alike in respect of transparency, which is such that I have frequently seen the bottom of the Darwent in three fathoms of water, and I believe it might be observed to a greater depth in a still calm. When long and heavy rains are accompanied with high winds, the mud brought by the rivalets, and that raised by the dashing of the waves against the lee shores, dispose the lakes to be somewhat turbid; but in two or three days after the weather is settled, the mud subsides, and they renew their former lustre.

Their

Their bottoms, to a great depth, are in many parts covered with green grass, of a short kind, inclining to that which is observed to grow on watery meadows, and that in all seasons of the year. Fens, mosses, and some stagnant waters, such as ditches, are known to send forth noisome smells, especially in the summer; but I have been acquainted with the above lakes for a number of years, and never found any smell arising from them in any season. They are, in my opinion, softer than most river waters upon this island, and extraordinary good for the purpose of diet. There are yet no less than seven other large and small lakes, none of which are more than twelve miles distance from Keswick, which have not been mentioned, each of which contain excellent fish; and by the variety of fishes which they produce, and other circumstances similar to the afore-mentioned lakes, it may be concluded that their waters are all salubrious and very fit for all the purposes of life.

There are many hundred thousand people, natives of India, who use scarce any other than stagnant water for their drink, as well as all other purposes of life; and where are there a more healthy people upon earth? The artificial lakes or tanks, as they term them, extend from near two miles in circumference, to that of the quarter of one mile, having them made large or little, according to the number of inhabitants which partake of them, &c. Upon the coast of India they have the monsoons, or regular periodical winds; they are accompanied with excessive heavy rains, and the length of this season, is generally about five months; in six of the remaining seven

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months,

months, the atmosphere is serene, and what falls in this season is dews only, for there is scarce a cloud or a drop of rain to be seen for about a fortnight before, and after the rains. The use of the reservoirs then, are for the purpose of supplying the natives with good water, which are highly necessary in the dry season, for without such the inhabitants of many large and populous cities, and towns, as well as villages could not subsist. They are generally dug in hollow places, and after the ground adjacent to the reservoirs hath been thoroughly soaked with rain, a great part of the rain, which falls afterwards, makes its way into the reservoirs, and if the monsoons are very wet, many of them overflow their banks, several of them being dug to the depth of five or six fathoms, which are very necessary, on account of the great quantity which is daily raised in vapours, through the effect of the intense heat of the sun, whose rays dart almost perpendicular, through a serene atmosphere, when he is near the meridian. Seven or eight tenths of the contents of many of the reservoirs are expended before the returning rains, which leave the remaining water far below the banks, although several of the small reservoirs are reduced to this state, and have lofty trees and bushes growing upon their banks, all which circumstances greatly contribute to becalm such waters, and in a great measure prevent the good effects which the winds produce upon them. I say notwithstanding all these disadvantages accruing to the remaining water, it continues exceeding good, is seemingly softer than the waters in high latitudes, and is sweet, bright, and very wholesome for diet. Heat makes stagnant fens, ditches, &c. stink, but
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it is not known to have that effect upon the reservoirs in India, although fish and other dead animals exposed to the open air, are turned into corruption in a very little time. In the course of the rains, the particles of earth, which are washed into their reservoirs, dispose them at times to become somewhat turbid, however this appearance does not continue long, for the water in a wonderful manner soon frees itself of the heterogeneous particles which seem to be chiefly owing to the causes before mentioned; viz, its rarefaction and agitation. The Indians have likewise large earthen vessels unglazed, which will stand a boiling heat, and such water as is turbid will pretty readily desposit its foreign matter in them, perhaps somewhat more readily than in glazed vessels: and being an extraordinary temperate and cleanly people, they are not at a loss how to account for the salubrious effects of pure water on the human body. It is therefore a custom among them to follow Boerhaave's precaution, and boil the water which they use for drink, &c. The reservoirs are most of them compleated after the labour of digging is finished. They are in many parts overgrown on their bottoms with a short kind of green grass. Many of them are dug very uniform, and have the whole of their sides regularly and beautifully staired with hewn stones, which are of a hard nature, and seem as though they might vie with marble itself, in point of duration; these latter sort of reservoirs are more expensive than the former, and I have not observed any material difference in their waters; but these which have their sides fortified with stairs may be less liable to have
their

their lee sides rendered turbid by the clashing of the waters, occasioned by high winds. Now the above waters are really stagnant ones for at least half the year, and yet there seems no doubt but that there are very salubrious. I could raise several other arguments to corroborate what hath been advanced, in favour of the above natural and artificial lakes of stagnant water, but hope enough hath already been said to convince people thus far, viz. That most spring waters, river waters, rain water, pump waters, &c. may be rendered much more pure and wholesome for the purpose of diet, &c. when they have been collected into reservoirs, cisterns, troughs of compact stone, large earthen vessels, &c. and exposed to the sun and winds for four, eight, twelve, sixteen, or more days as may be found necessary, in order that the waters may have time to free themselves from their noxious and hurtful contents, by the assistance of the sun, winds, &c. as people cannot be too careful in making a proper choice of wholesome water.

Particular cautions respecting WATER.

WHOLEsome water for the purpose of diet being a thing of great importance, and no less than highly necessary to the enjoyment of a proper state of health; I shall recommend some particular methods and advantages which may be taken to procure that most valuable fluid. I hope what I have already said respecting proper water for diet, and what I shall yet further say on that head, will sufficiently shew, how people in almost any situation, may at a pretty reasonable rate supply

supply themselves with it. Let me in the first place recommend it to such people as have grounds and water adjacent to towns, villages, &c. not to hinder their fellow creatures from using such waters as are good, on paying reasonable damages. There are a variety of hurtful substances contained in the ground, which are soluble whenever they come in contact with water, and which are liable to be mixed amongst and carried off with it. I shall here name several of them, and mention the effects which some of them produce on the human body.

Arsenick is frequently contained in marcasite, which is very plentiful in many parts of the world, and its being soluble with water, and rendering it poisonous, hath been already mentioned in the instance of the spring called Methorn in Germany.

Vitriol of Copper, or Roman Vitriol is of a sapphire blue, when in large masses: this salt is soluble in water, and found to be mixed with several waters in minute particles; when taken into the body a few grains of it become a most virulent emetic, and may therefore be deemed a poison.

Vitriol of Iron in large masses is of a green colour. There are abundance of springs in many parts of Europe which contain iron, and this salt, in exceeding small particles; those springs go by the various denominations of chalybeat springs, mineral springs, iron waters, &c. They are generally endowed with medicinal properties, but vary greatly in this respect, which is said to be owing to the different kinds of salt they are impregnated with. There are many in Germany, and France, impregnated with a fixed alkaline one, which are excellent for the attenuating, tough, and viscid humours; and for removing obstructions of the viscera. They are

are also given in jaundices, in palsies, and in nephritic cases with success. These waters are used externally with success in tumours and hard swellings, and in paralytic numbness. And Heister informs us, " that medicinal waters drank in the summer-time pretty largely, are the best means, as preservatives, and for curing disorders of the ears, and they often perform more than any other remedies whatever." However, the medicinal virtue of mineral waters is no reason why they should be wholesome, when used constantly in the way of diet; nay, they are often just the reverse, and capable of destroying the best constitutions, provided they contain active substances, sufficient to deserve the name of mineral waters. Having in the course of my researches after medicine met with a mineral spring, which proved a pretty powerful attenuate, and a strong diuretic, and finding that about four families used it for the purpose of diet, I acquainted them it could not be good for that purpose. Yes replied they, it is very good, it is mineral water; but inquiring still further, and representing how pernicious it must be to child-bearing women, &c. one of them burst into tears, and related a very tragical story, beginning with her own case first, which was to the following purport, viz. Before she came to inhabit at that place, she had had two healthy children, and one soon after she had settled there, that in the course of about six succeeding years, she brought nothing to perfection, nor even life, altho' she was then in her prime, but had had three miscarriages in that time; and was about the time of the last reduced, for almost a year, to such a weak state, that where she fell, there she was

was obliged to lay, until one of the family, or a neighbour assisted her. A very loud palpitation of the heart attended this uncommon weakness, and in the course of it, she was exceeding quick of hearing. After I had used this water in the way of medicine, for a few days, I found the same effect from it, in regard to hearing, and was surprized to hear my watch tick cross a room, fifteen feet wide. Now this part of the story seems in some measure to strengthen Heister's account of mineral waters. But to return, when I conversed with the woman, I found she had gained a little strength, which induced me to signify to her, that she had changed the water for diet; she said no, but presently recollected, that the Doctor ordered her chicken and chicken broth, and a little wine, which broth was made of another kind of water, for she said they never boiled the pot with the mineral water, because it gave the meat a bad colour, and after she used this diet she said her strength began to return. She afterwards refrained the use of the mineral water, and brought a fine healthy child, as soon as could be reasonably expected. She likewise acquainted me with the case of two other women, her neighbours, which used the mineral spring, and who, according to to their ages, might be supposed to be in their prime of life. When the first came to the place, she had one child, but continued there only two years, in which time she enjoyed a bad state of health, and had two miscarriages, but no living child; afterwards removing a mile and a half from the place, she had had since four fine children, is pregnant with the fifth, hath had no more miscarriages, and now enjoys a good state of health,

health. The third woman brought with her a young child, who hath continued there for many years, but hath had no children since. I could relate still more mischief which hath been occasioned by the use of this water, and shew that it is not women alone that hath suffered by it, but I think it is needless ; for certainly water which proves an active and powerful medicine, and is capable of producing the above tragical effects, cannot fail to hurt such as use it commonly. And physicians generally caution their patients neither to use it too long at a time, nor yet too freely. This is a kind of water which, when used imprudently, will sometimes bring on an obstinate diabetes, with other diseases. The above were robust people, being labourers, and employed in husbandry, and that in a champaign country, abounding with a very salubrious air.

The first mentioned woman, was attended by three different people versed in medicine, two of which were resident in the neighbourhood, and all three reckoned skilful in their profession, and none of them ever suspected any harm from the mineral water. These circumstances considered, there is reason to believe, that numbers of people in many parts of the world, are miserably deceived by this kind of water, and also by many other springs, and some running waters, which shew no signs of iron ; for many of them contain an active fixed alkaline salt, similar to that found in iron water : and I am the more persuaded to this opinion, by reason I have heard several people, belonging to different parts, insist, that as mineral water was a good medicine, it must be wholesome for diet. The particles of iron which the above spring contains

tains are very subtille, and presently leave the water on being exposed to the open air, or on heating the water; but on evaporating the water with a boiling heat, I always found the dry sediment to contain a quantity of acrid, lixivious salt. This is the substance, which, by the account of able writers, proves a powerful attenuant, and seems to produce the mischiefs before mentioned.

But this salt is not peculiar to iron water alone, as has just been hinted, but is found to be contained in many other springs and running waters. It is a true, fixed, alkaline salt, much like the natrum of the ancients, or soap earth, which salt has properties similar to those of the common fixed alkalies; they are very powerful when taken by way of medicine; in many cases one grain is a sufficient dose, and an ingenious author acquaints us, that one grain of the above fixed alkaline salt, found in waters, is sufficient to destroy many constitutions. It is a common method used by many in regard to judging of the salubrioness of water, viz. that all waters, as they are the more pure, they are the more soft; and that such as boil garden stuff the quickest, and mix the most readily and perfectly with soap, are to be preferred before such as are hard, and have the contrary effect; yet, notwithstanding all this, the waters which contain the above fixed salt, and but little of any other extraneous matter, ought to be excepted; for the above salt having the properties of the fixed alkaline salt which is put into the composition of soap, it causes it to be apparently softer than the other water in the common purposes of life, and is the more deceitful and dangerous on the above

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account;

account ; for such water as contains the fixed alkaline salt, in a moderate degree, and no other foreign substance that can counteract its natural effects, will have the following properties, viz. it will boil peas and other grain soft, and in less time than rain or river water ; it will boil greens, such as brocoli, &c. tender, and of a good colour ; it will make a strong and good-coloured infusion of green tea, but will be attended with this inconvenience, that it will extract most of the strength of the tea upon the first drawing ; and it boils meat red and soft. There is a great probability that vast numbers are deceived, and suffer by such water. The most important inquiry is what influence it has upon the health and constitution, or what effects or changes the daily and indiscriminate use of these salts will produce in the animal fluids. The learned Boerhaave has given us a full and concise account of the medicinal effects of the alkaline salts. I shall give it as nearly as I am able in the sense and meaning of an author of undoubted knowledge and authority *. “ The first effects “ which,” he says, “ the alkaline salts have upon “ the human body are, they destroy the acids, “ which are few, except in the primæ viæ, and of “ the mild vegetable kind. 2. If they meet with an “ acid in the human body they effervesce, excite “ bubbles of air, flatulencies, and eructations ; “ they turn into a neutral salt, which (being “ harmless, penetrating, aperient, diaphoretic, “ diuretic, and anticeptic) produces new effects, “ arising from this newly formed salt, and not so “ properly ascribed to the alcalies, though sub- “ sequent

* Chem. vol. 2. p. 58.

frequent upon their use 3. By the action of this
 effervescence they stimulate the nerves, put the
 animal spirits in motion, and change the former
 motion of the nerves and spirits: hence they
 often cure hypochondriacal and hysterical spasms,
 and the disorders depending upon them, as we
 learn from the famous anti-emetic of Riverius;
 whilst the alkali drank in the act of effervescence,
 with lemon juice, removes the cholera, and
 the most obstinate vomitings, incurable by any
 other method. 4. They attenuate whatever is
 connected with the acid: therefore when pru-
 dently given they produce a fine effect upon co-
 agula of milk, and happily resolve other tena-
 cious substances. 5. They attenuate whatever
 is glutinous, oily, or fat, and commodiously
 mix it with water; from hence they are deter-
 sive; and hence spots of grease are cleared away
 by the lixivium of these salts, as is well known
 to fullers, washers, and dyers: therefore by
 moderate use they clear the chylopoietic labora-
 tory from its glutinous foulness. 6. They re-
 solve the coagulum of the bile, lymph, blood,
 and serum, being admitted into the vessels, and
 there agitated by the vis vitæ. 7. By their a-
 cid stimulus they put in motion what is inert:
 hence they promote the urine, sweat, and sa-
 liva, and move the belly. 8. Therefore where-
 ever there is an inert, tough, mucous pitiuity,
 a consequent acidity of the vegetable aliment in
 the primæ viæ, the substance or effects of an
 austere acid, manifested in coagula, an abound-
 ing colluvies of watry serum, tenacious pin-
 guous concretions, and the disorders often ari-

“ sing from these, the dropsy, jaundice, leucoph-
 “ leg-matia, gout, rheumatism, and scurvy; these
 “ salts are of very great service, if they be admi-
 “ nistered prudently, well diluted in small dozes,
 “ and at proper times. That species of gout which
 “ arises from too much acidity, can scarce be
 “ more happily cured than by the sparing and
 “ long-continued use of alkaline salt: but yet it
 “ ought not rashly to be recommended as an uni-
 “ versal remedy against the gout, because it is
 “ prejudicial to such gouty persons as are of a
 “ bilious constitution, and whose humours already
 “ spontaneously tend towards a putrid alkali.
 “ 9. Their use is pernicious in all cases where the
 “ native salts begin to degenerate into the acrid
 “ alkaliescent putrid kind, and where the natural
 “ oils of our body incline towards an acrid, foetid,
 “ putrid, rancid, volatile disposition, manifested
 “ by their offensive exhalations, and the high co-
 “ lour of the urine.”

They are more especially destructive when the bile
 appears to be in this state, and when the humours are
 too much dissolved, fluid and tender, and tending to
 putrescency; hence in the plague they are immedi-
 ate poison; and in inflammations, suppurations, gan-
 grenes, mortifications, continued putrid fevers, and
 disorders depending upon too great a velocity of
 the blood, their internal use must be entirely pro-
 hibited. Dr Lewis gives a correspondent account
 of the operations of alkalies, and very justly answers
 an objection which arises from some late experi-
 ments, in which they are found to resist putrefaction
 in the fluids and solids of dead animals, by shew-
 ing, “ that their action, upon living animals,
 “ must be very different, as they apparently in-
 “ crease

“crease the colliquation, with which all putrid
 “diseases are accompanied*.” Dr Huxham like-
 wise gives us some instances of the fatal effects of
 these salts, upon those, who have for a long time
 together taken the soap lees or the alcalious
 saponaceous hotch-potch of Mrs Stephens; and
 says, it evidently appears, “that the blood, by
 “these means, is dissolved, and becomes putrescent,
 “and that the urine becomes alcalious†.” Dr
 Buchan says, “that a diet consisting too much of
 “alcaline substances will soon render the humours
 “putrid. And that the excessive use of alkaline
 “salts will occasion the malignant putrid or
 “spotted fever‡.” Which is by some called the
 pestilential fever of Europe. The effects of alca-
 line salts, as represented by the above eminent
 authors, brought into my remembrance, that the
 unfortunate woman who was reduced to so weak a
 state, by the use of the tempting mineral spring,
 had about three months ago, lost the child she bore,
 presently after she came to the neighbourhood of
 the spring, and also the infant she bore after re-
 fraining the use of the above water, within a
 week of each other. It is said they died of a
 putrid fever; and having heard a year ago, that
 this family had again resumed the use of the
 spring, I imagined something more might be
 learned on taking a short journey to the place, in
 regard to malignant putrid fevers, and here I
 was not deceived; I found the woman a second

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time

* Mater. Med. p. 481.

† Essay on Fevers, p. 49.

‡ Family Physician, p. 63, and p. 233.

time reduced to a feeble state, on account of using the above water. She acquainted me of the symptoms which attended her two children, which were near alike, and by comparing them with the symptoms which Dr Buchan and others give of the malignant putrid fever, it appears, the fever which carried them off was the same, only their symptoms appears to have been more violent than ordinary. The eldest was carried off in nine days, the younger in seven. This disease extended about a mile and a half round, attacked about twenty more, who were in general under puberty; but as they had used water of another quality, they were not so terribly affected, and only two of them died, which was on the twentieth day after being seized with it.

Living in dirty low damp houses, which are situate in a confined and bad air, wearing dirty clothes, &c. is sometimes the occasion of this dreadful disease. But the mother of these two first mentioned children, is a cleanly person, who with her family breathed a salutary air; and it seems she would never have been brought to use the water a second time, had it not been through the instigation of several people, who made a scoff of any thing that was said against it. They judging of medicinal waters, as hath before been observed.

The eminent Dr Rotheram who hath wrote very judiciously against the internal use of a particular water, which he observes contains about nineteen grains of alkaline salt to a gallon of water, says, "It is of no avail to say, as hath been said publicly and repeatedly of Cox Lodge water, that in some cases it may be beneficial; this is surely acknowledging its efficacy as an alkali; and if it
" has

“ has efficacy to do good by destroying the acids
 “ or attenuating the viscid humours, surely it
 “ must have efficacy to do harm, where these acids
 “ are too few, or these humours already too thin.
 “ Further, when used by persons in perfect health,
 “ which health most certainly depends in some
 “ measure upon the due proportion of acids, and
 “ the proper texture or consistence of the animal
 “ fluids, it must destroy the equilibrium, and there-
 “ fore must inevitably bring on disorders. Nor
 “ will it be allowed, that the quantity of alcalia in
 “ Cox Lodge water is too small to produce effects
 “ of this kind; for it will appear, by constant use,
 “ it must and will operate powerfully as an at-
 “ tenuant. The waters of Aix-la-chapelle do not
 “ appear to contain a larger proportion of alcali
 “ than those of Cox Lodge, and yet they are found
 “ by long taking to render the urine alkaline as do
 “ those of Carolsbadt in Bohemia*. If there be
 “ a sufficient quantity of alcali to pass through the
 “ course of the circulation to be secreted by the
 “ kidneys, and produce this effect upon the urine,
 “ who shall say that it will not in some degree
 “ attenuate? that it will not dissolve the blood,
 “ dispose it to putrefaction, and bring on or
 “ heighten those putrid fevers, dysenteries, alcalef-
 “ cent scurvies, and other disorders.” And in
 another place the Dr says, “ that water abound-
 “ ing with alkaline salts can never be proper for
 “ common use; but he allows that a very little of
 “ them may not hurt the water.” Allum is some-
 times found in water, and being a powerful astring-
 ent, such waters as abound with it, must be very
 unfit for constant use.

How

* Philosoph. Trans. vol. 51. No. 28.

How to procure good WATER for DIET.

LET us in the first place suppose a large town so situate, that water is conveyed to it from an eminence by the help of pipes; now if such water runs turbid into the pipes, or conveys with it any hurtful substances, such water would be rendered much more pure and wholesome, if it had sufficient time to subside, either where it is received into the pipes, or where convenience could be made for that purpose, at some distance from the pipes, in one or more places. Such supplies of water are generally conveyed in artificial channels, which are sometimes raised in particular places, above the low adjacent grounds, over which it glides; and I apprehend, that there are few of these rivulets where the adjacent ground will not admit of the water being formed into spacious basons, by building close and strong dams at a good distance from the side of the channel, either on one side or both, as the situation of the ground shall require, in order to contain a large collection of it. But if no such convenience offer, a large bason might be dug, to contain as much water as the rivulet would fill, in the space of nine, ten, or more days, as should be adjudged necessary, and so many days time would the water have to drop its impurities, and in some cases especially in warm and dry seasons, a little more time. And although the expence of buying ground, daning or digging, might in some cases be great, there would be in proportion great numbers to sustain it, who, I am convinced, would be amply repayed for such an undertaking. For certainly
there

there must be a vast difference betwixt water which will form obstructions in the human body, and such water as will remove them; or water which will bring on diseases, and water that will prevent them, and carry diseases off. It appears to me, that the above methods would be practicable on the new river water at London, and many other waters which supply a great many populous places in Europe. 2. Let us now suppose a large town which is at present using turbid and impure water for diet, and on account of the want of room, &c. have not the convenience to mend the bad qualities of their water by the assistance of the sun and winds. In this case, methods may be pursued to render this water more wholesome. Boiling such water has a good effect. It is observable, that before water is agitated to a boiling heat it is expanded, and takes up a good deal more space, consequently foreign substances contained in it will have room to subside.

Further, the embryos of animalcula will inevitably be destroyed by this process, and they are supposed to be the chief cause of the waters putrefaction, when kept in wooden vessels. I knew a man, who, when he used unboiled water in the summer and autumn, seldom failed to void the worms called ascarides; but when he used such water only as had been boiled, that complaint ceased. Now, for the above reason, I would recommend Boerhaave's precaution. The Indians boil all waters which are designed for internal purposes. Great care should be taken in the course of boiling the water, that neither smoke, nor any other substance be communicated to it, in the course of boiling. Vessels of cast iron may
answer

answer very well for the purpose, provided they have been some time in use, and be kept dry and clean, so that they are entirely free from rust. I apprehend that glazed boilers may be made of earth to stand the fire, when surrounded with brick and mortar, (or even without this precaution) and fixed in the manner of common boilers. If so, they would be cleaner and better than iron itself. After water hath been boiled, it will keep sweet for a long time; and in proportion to the quantity that is used in a family, earthen vessels may be provided, which will contain as much boiled water, as will supply the family about eight or ten days; by this means none of the boiled water need be used for diet, until it hath had several days time to drop any impurities it may contain after boiling. Such earthen vessels should have a cock fixed at some distance above the bottom, in order to draw the pure water off, without agitating it. We are told, that the waters of the river Nile in Egypt, must stand for some days before it becomes perfectly bright, and that it was a custom at Cairo to rub the sides of the vessels in which it was contained, with a few bruised almonds, by which means, it subsided the sooner. 3. Let us for instance suppose villages, country houses, &c. supplied with impure water, either from springs, rivulets, fen grounds, or otherwise; such waters might be rendered much purer by being allowed a sufficient time to precipitate their impurities in small reservoirs or cisterns, situate in cleanly places, and where they would be well exposed to the sun and winds. Two reservoirs or cisterns would answer in most cases much better than one. The time taken to expend one reservoir or cistern might be

be allowed for the water of the other to settle; and the water might be conveyed into them various ways, according to the situation of places, and as circumstances should require. An artificial channel or pipes, the assistance of wind or water engines, pumps, horse carts, &c. or even buckets, would be a cheap method of procuring natural drink.

When kings and conquerors tilled the ground, they certainly knew wherein true happiness consisted, much better than the indolent and affluent do in these modern times of shameful degeneracy. An advantage may often be taken in constructing reservoirs and cisterns, in order that their bottoms and sides may be cleansed, by letting all the water out of them through a short pipe fixed at the bottom of their deepest side; and this will always be practicable where the ground is unlevel, or lies in a declivity; for suppose the reservoir is dug in the earth, a level may be cut to the lowest side of it; and in order to keep the water clean in the reservoir, or cistern, it may be drawn off for use through small pipes, fixed at a distance above the large cleansing pipe, which small pipes ought to extend six or more inches into the reservoir or cistern, in order to receive the water in its greatest purity; but where the ground lays so convenient that a suitable reservoir may be formed, by making a substantial dam, a level at the lowest side of it will scarcely be wanted, and the necessary pipes may be laid at the time of building the dam. 4. Many single families, and even large villages, are at times reduced to a scarcity of water, and are often obliged to go a great distance for it; notwithstanding numbers of these places might be plentifully sup-

supplied with good water, at a moderate expence. Water will make its way over grounds which have but a very small declivity. Upon the sides or at the bottom of unlevel grounds, either reservoirs might be dug, or formed by dams; and in order to receive the rain water, very small channels might be cut in the ground above the main channel, to extend from the edge of the reservoir right up the rising ground, and to have smaller channels branching out of it. The branches would send the rain water into the main channel, which would pour it into the reservoir, and when near full, the water ought to be diverted another way, to the intent that the water in the reservoir may have time to subside. Afterwards a small channel might be cut round the brink of the high side of the reservoir, in order to prevent turbid water from draining into it. In the above case two reservoirs would often be better than one, as whilst the one was expending the other might be replenishing. The above method of cutting branches, &c. admits of exceptions, but the intelligent husbandman, may, according to the situation of places, easily find out suitable methods from the above. Beasts, as well as the human species, might be limited to a particular field, and often supplied with good water after the above method; as they will not drink bad water when they can get good, and as bad water is often the cause of their death, there is great reason to believe that they would thrive much better with good water, and that it would be greatly to the interest, as well as credit of the owners, to supply them with it. Basins of water, intended for the use of beasts, might be railed round, and the fence indented into the water at the drinking

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ing place (the bottom of which might be laid with stone) in order to prevent their wallowing in it, and rendering such water turbid; but in several situations more cleanly methods than this might be adapted, which may be easily gathered from what hath been said respecting reservoirs and cisterns. Persons desirous of having that precious substance, milk, in its highest perfection, should feed their cows with such substance as have retained their juices incorrupt. Many are pleased to see their hay turn brown out of the stack, which is an error of the first magnitude. This sort sends forth a putrid and disagreeable smell, and this sense of smelling was doubtless given us, by the all wise creator, in order that we might be able to judge of the purity or impurity of things, thereby "to refuse the evil, and choose the good." On the other hand, hay which turns green out of the stack, has a pleasant smell: proof sufficient of its having retained its juices pure, and that it is wholesome. Such cows as are nourished with this sort, and other sound food in the winter, will be in good condition in the spring: whereas cows which have been stuffed with putrid hay, putrid grains, &c. frequently exhibit the morbid state of their humours in the spring, by the breaking out of cutaneous eruptions, a feeble state of their body, &c. If we make tea of the leaves of baum, sage, or mint, which in the course of drying become brown, the taste of such tea, will be disagreeable and even nauseous; whereas, when there remains after dying, the natural green colour, they retain their pleasant smell and taste, and make an agreeable infusion. Now it appears, that people ought to be more circumspect with re-

gard to the managing grafs intended for hay. How different muſt that milk be, which is produced from cows that are naturally fed with wholeſome vegetables, and wholeſome water, from that produced from cows whoſe humours are rendered morbid by putrid vegetables and putrid water? The firſt milk will keep twenty four hours ſweet in a ſeaſon when the other will not keep nine. The firſt milk is extraordinary good nourishment, and will, when perſiſted in, cure various obſtinate diſeaſes. The other is capable of producing diſeaſes, and can never be fit to enter the human body. Thus, ſuch animals, as are the moſt ſerviceable to mankind, are often half poiſoned, and kept in miſery; whiſt their milk tends to deceive people: but to return to water. 5. Rain water which falls upon houſes in country places, after having been allowed a few days to precipitate its extraneous contents, becomes very bright, and will, as well as the other, anſwer the neceſſary purpoſe of diet. But in towns, where it often falls through ſmoke, it is apt to contract a diſagreeable taſte from the ſmoke. In country places, good quantities of it may often be procured, after the rain hath waſhed the ſut and other impurities off the houſes. Water, when not in too large a body, being an extraordinary traſticable fluid, may be eaſily diverted from the roof of a houſe by the application of ſpouts and ſmall pipes into ciſterns, ſituate in clean places, at convenient diſtances from ſuch houſes as firſt receive it. This method of obtaining good water, would be attended with another good convenience, viz. it would prevent a great quantity of water from being beat into the walls through the force of winds, the effect of which,

which, soak and decay the walls apace, besides rendering the rooms damp and unwholesome. The same effects likewise tend to shorten the duration of furniture, &c. Filtering water through different kinds of stone, beds of sand, &c. are methods used by some, for preparing good water for diet. I have tried to render water pure by the above methods, and when I had used every means I could think of, with the greatest assiduity, all my endeavours proved abortive. I have lately examined water, which was filtered through a large stone of a close girt, the concave area of this stone was not less than five superficial feet, the thickness of its sides about two inches and a half, and when filled with pelucid hard water, the girt of the stone was so close, and fine, that it only filtered about five eighths of an English pint per hour. The sediment of this filtered water, was, in quantity, about five grains by weight to an English pint; although the water was evaporated from it with a boiling heat, which according to Dr Rutty's account, will only leave about half the sediment procurable by a gentle evaporation, which causes the water to be no warmer than what the hand can easily endure.

The quality of the sediment was a mixture of gravel, a little salt, and a little earth ; and the gravel seemed to weigh more than either of the other two substances : its particles of gravel were such, that by putting a little of the sediment betwixt the teeth, it may be heard to crackle. By the accounts of experienced anatomists, &c. respecting those infinitely fine vessels, which compose the glandular parts of the human frame, these hard and pointed particles must be liable

to cause obstructions in several parts of the human body; and although such obstructions are brought about imperceptibly, that is no reason why they should not in some measure weaken both body and mind; therefore it appears, the filtering of water does not answer the intended purpose near so well, as reservoirs and cisterns do. In order to form tight reservoirs and cisterns in open spongy grounds, an artificial bottom may sometimes be necessary. There is one particular successful method used with the bottoms of large fish-ponds which is as follows, viz. If the bottom is false, they lay the foundation with quick-lime, which slacking will make as hard as stone*. Notwithstanding lime water, when newly made, or kept close stopped in bottles, is an active medicine; yet when exposed to the air for a few days, the strength and taste of the lime entirely vanishes: and in order to cause the turbid waters in new dug reservoirs to subside the sooner, quick lime is often thrown into it, which has the desired effect. The mortar used in Italy for making water courses, and cisterns, and also, in finishing, or plastering, of fronts, is of two sorts; the one is composed of lime and hogs-grease, mixed with juice of figs; and the other is of the same ingredients, but has liquid pitch added to the rest, and is first wet or slaked with wine, and then pounded or beaten, with hogs-grease and juice of figs†.

Good clay may easily be procured in many countries, and when it is properly worked, may, in most cases, answer to supply the defect of false grounds,

* See fish pond in Croker's Dict. of Arts and Sciences.

† See Mortar in Croker's Dict. of Arts and Sciences.

grounds, or such as make waste of the water: one tire of common bricks, flat tiles, or flat stones laid regularly and close upon the clay bottoms of cisterns, &c. might perhaps be of service.

Method of Investigating the properties of Water.

THE celebrated Mr Boyle, and after him many learned and judicious authors upon this subject, have laid down a multiplicity of rules for judging of the properties and contents of water: a few of which I have mentioned already, and shall now lay down such other methods and precautions, taken from able authors, as, I think, will be necessary, in order to enable people to choose good water for themselves. After observing what appearances are made at the spring head, and in the channel through which the waters flow, as whether any ochreous or chalky sediment be left upon the stones, whether the water has any slime or scum at the top, a sufficient quantity of it may be taken into clean and well corked glass bottles, and be subjected to as many of the following trials as are judged necessary.

1. The most common, and indeed the easiest, method of judging whether water contains any considerable mixture of saline matter, is to put a little of it into a clean thin glass; and having ready prepared a saturated solution of the saccharum saturni or sugar of lead, in clear water, let two or three drops fall into the glass, and if it make no cloud, milkiness, nor precipitation we may be pretty sure that the water contains no quantity of mineral salt that need be much regarded; for one grain of salt of almost any kind, put into a pint of

pure distilled water, will discover a cloud or a wheyishness, upon dropping in a little of this solution, and upon standing a few hours, will form a thin crust upon the sides of the glass. If there be any considerable quantity of acid alkaline, or neutral salt, three drops of this solution will instantly turn a wine glass full quite turbid and milky, and in proportion to the quantity of the contents, these effects will often vary, so as to afford an opportunity of forming some probable conjecture about them. This trial is easy, and at the same time determines so quickly the comparative purity of most waters, that it is recommended by almost every good author.

2. Another method frequently practised, is by dropping into it a little solution of pure silver in good aqua-fortis. This trial is said by Dr Rutt, to be more touchy than the former one, where it meets with marine salt, though Mr Boyle seems to be of a contrary opinion, for he thinks, the solution of the sugar of lead is affected with less degrees of impurity than the solution of silver. But the silver, says Dr Rotheram, has undoubtedly this advantage, that it will in some measure, by the colour of the precipitated sediment, shew the nature of the contents, as this sediment is always of a brown or black colour in the sulphureous waters, and generally white and grumous in these which contain any quantity of marine salt. The opacity of the water in both of these experiments is generally proportionable to the quantity of earth it contains; for these metallic solutions attract the saline parts, which are the band of union between the earth and water. And from all the experiments I have heard related, these two methods are so very similar, that, excepting in the case of
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fulphur, the effects will generally be the same; and as the solution of sugar of lead is more easily prepared, and we may in most cases depend upon it, the other is not always needful. I would not here be understood to assert, that all water which shews itself turbid with one or both of these solutions, is unfit for common use, several waters may contain a sufficient quantity of mineral to occasion these appearances, (for very little will do it) and yet be pleasant and wholesome; but whenever these effects are observed, we may be sure of some mixture, and subject the water to further experiments. But if water, which is designed for common use, doth stand these tests; and betray no foulness by its taste, smell, or colour, we may be satisfied with it.

3. Another trial commonly made, is by dropping in a little lixivium of water, (usually, though improperly called the oil of tartar,) or a solution of any of the alkaline salts: if there be any earth suspended by an acid this will precipitate it; and by this means will generally shew a small degree of hardness.

4. The usual way of determining the hardness or softness of water is by scraping any certain quantity of soap into it, and observing how it dissolves: castile soap is perhaps the best for this purpose. If water be perfectly soft the soap will dissolve quickly, uniformly, and without curdling, and upon shaking the glass briskly, will raise a strong froth at the top; but the smallest degree of hardness will shew itself, either by the soap not dissolving so readily, or by less froth remaining after it is agitated; and the different degrees of hardness may hereby be very well determined. This may be tried with about a grain

grain of soap to an ounce of water. Soft water is good for diet, tho' that which is soft through the effects of alkaline salt ought to be excepted.

5. Another examination of water is, by mixing the mineral or vegetable acids, and observing whether it ferments or turns opake. If these effects be observed, it may be concluded, that the water contains either an alkaline salt, or an absorbent or calcareous earth, the latter of which will more frequently appear to be the case. Dr Ruttty says, " that the spirit of salt is found to be a more " sensible test of either than oil of vitriol."

6. Observe whether they change the colour of syrup of violets, the blue tincture of the cyanus, or almost any other blue flower. An alkaline salt instantly turns all these tinctures to a full and beautiful green; the absorbent earths and calcareous nitre likewise give them a greenish cast, but not so strong nor so quickly; and the colour will vary in its brightness, or intensity, according to the nature and proportion of these ingredients. The mineral acids suddenly turn the syrup of violets to a bright red; and if the syrup be fresh and good it turns red with Alum. Dr Ruttty observes that, " when old syrup is used, it will turn green."

7. Observe what tincture the water extracts from galls, jesuits bark, or any other vegetable astringent. If it strikes red or purple, it is a sure mark of iron; if blue, it shews vitriol.

8. By dropping in a little solution of quicksilver in aqua fortis or spirit of nitre, or a solution of sublimate in water, if any of these meet with an alkaline salt, they drop an orange coloured yellow or white precipitate, as the alkali approaches to the lixivial or urinous kind. Mr Boyle has

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mentioned a great many more trials of this kind, as may be seen in his memoirs on mineral waters. But by making the above experiments upon the waters, especially when they are tried in concert, and compared with one another, we may form a tolerable guess of the purity or impurity of water; and indeed, if water will stand both the first and fourth tests, it can scarcely be deemed unfit for common use.

9. Iron waters are best examined at the spring head, the particles being exceeding small, are often found to be volatile, and to leave the waters in the course of running. Three grains of powdered galls will turn two ounces of iron water into a reddish colour, in less than a minute; such waters generally discover themselves by keeping the bottom of the channel near the spring head, of a rusty iron colour, and there is often a scum floating upon such waters, where they issue out of the ground, approaching to the colour of polished iron.

10. Another test of the purity of water, insisted on both by ancients and moderns, is its lightness. The purest waters generally are the lightest, yet the specific gravity is not always a certain rule to judge by, for the contents of impure waters differ much in specific gravity amongst themselves. Several of the vegetable substances will scarcely increase the weight of the water in which they are infused, the mineral ones generally do, but not in the same proportion; for some of the salts differ from one another in specific gravity more than one third, and therefore the same quantity of each cannot make an equal alteration in the specific

fic gravity of water. An ounce of good alkaline salt, and the same quantity of putrified nitre, dissolved in equal quantities of distilled water, will produce two waters of different specific gravities, though the quantity of the contents be the same in each. Mineral substances do indeed add considerably to the weight of those waters which are highly impregnated with them, but, in general, the difference of specific gravity in the waters in common use is not so much as many people imagine. For instance, a hard water from a pump, which weighed more by eight grains to the gallon than Dr Heberden ever found the pump waters in London, weighed only about $\frac{1}{700}$ part more than rain water. The above circumstance induces me to conclude, that the weighing of water is but an indifferent method of determining the goodness of it, especially if it is not weighed with an extraordinary good beam, and the greatest accuracy.

The Disposition, Diseases, Actions, &c. of People depend upon their using a particular bad Sort of Water for Diet.

THE use of a certain water has a bad effect on the mental faculties. I shall not hesitate to describe its qualities and situation, and likewise the disposition, actions, &c. of those who use it.

The situation of the above water is at the junction of the earth and sea; but as it would be unbecoming, &c. to insert the geographical point of situation, I shall wave it, and only observe that it is in a pretty high latitude. At high-water mark are large and irregular hills of sand, rolled on shore by the sea, and raised higher by the force of winds;

winds ; some of the hills exceed thirty feet in perpendicular height, they extend about one hundred or more yards in-land ; amongst those hills are hollow places, in these parts holes are dug about four feet square, and four and a half deep, through about three feet of sand, more or less, and about one foot and a half more into a pretty solid clay : when the rains descend, they presently make their way through the sand hill into these holes, and carry with them plenty of sand, and not a little earth, together with some marine salt, and in the warm season, a great quantity of small red worms are mixed with it. This water will, upon evaporation, with a boiling heat, leave from twenty to thirty grains of dry sediment to an English quart, and half the weight of this sediment, seems to consist of small panules of chrystalline sand. Here then are plugs of various sizes, and a multitude of different forms too well adapted to plug up the wonderful fine strainers in the human body,* and earth is not wanting to increase their mischievous effects. The quantity of marine salts, in this water, varies pretty much ; a strong gale of wind from the sea carries off salt water from the tops of the surges, drops some of it upon the hills, which makes its way into these repositories, and increases the saltiness of the water. The ale which the aforementioned people use is made of a water similar to the above : It goes off slowly by urine, heats the body much, causes relaxation, and other bad effects depending thereon. This place is situate upon the edge of a champain country, and the goodness of the air is such, that it may perhaps

* If you view a million grains of sand through a microscope you'll scarcely find two of the same size and shape.

perhaps vie with any maritime coast in Europe, there being seldom any fogs or other hurtful exhalations in the air, and the land winds are two to one more common than those off the sea; yet notwithstanding all this, the people are afflicted with the scurvy, the gravel, the dropsey, with worms to a high degree; the palsy is common amongst them, and some of the younger sort are deficient in hearing. The common course of nature is very often observed in many, and hysteric people the most so of any. The small-pox, at times, proves very fatal in the above places, as well as inoculation. Sometimes a large tumour will rise at some distance from the incision, and discharge a great quantity of matter, loss of sight, and death also, have lately been attributed to the effects of inoculation. The people who partake of this water are, in general, less active than in other parts; their complexions are generally wan, and when strangers settle, they have a florid complexion. The use of this water makes a much greater change in their colour than what is generally affected by the sea air, and their neighbours who use better water, and live a very small distance from the sea, have much more lively complexions than they, and are less inclined to indolence and vice.

There are some particular persons who use the above water, who seem to have pretty good morals; however, the generality of them are quite the reverse, and exhibit a meanness of soul which is really shocking; intemperance, pride, avarice, and ambition, seem to be their leading vices. These detestable evils prompt many to act, as tho' they had not the fear of God before their eyes. A
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spirit of contradiction reigns in the place to an amazing height. Envy and premeditated malice are the causes of many private injuries; slanderers, back-biters, and tale-bearers are very busy, and this is the employment of the men, as well as the women. The place is called by the neighbouring people, a black-guard place; who is poor, and yet it would be difficult to find its equal for pride. The most avaricious and indolent do, in general, exhibit the greatest degree of it. Amongst other base and contemptible vices, the spirit of tyranny reigns in the place, which often causes mischievous effects. The generality of children in the above place are perhaps scarcely to be equalled in regard to perverseness and stubbornness of temper. If a man acts his part in support of the most necessary laws, the meanest spirited, and most vile, becomes his avowed enemies, and by secret and wicked means conspire to ruin him. When a hypocrite in office winks at law-breakers, he is caressed and accounted an honest man. If a man displays a genius superior to the rest, he is levelled against with all the spleen and malice imaginable. However, this circumstance hath been observed in other places, and mentioned by authors, who call such as are ambitious, and cannot bear a genius superior to their own, by the name of fools; and if this be the name they merit, it seems, there are plenty of fools to partake of the above water. I could relate many other mean and despicable actions common to the above people, but their subject is highly disagreeable. High latitudes within the temperate zone are generally healthy, especially in such situations as are well adapted for good air; but this does by no means coincide

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with the above diseases, and as the neighbours of the above people are more healthy, more humane, and better disposed, physicians frequently attribute the use of bad water to the cause of the above diseases; further, as the disposition of the people is so very preposterous, contrary to reason, &c. and as such water seems, above all others, the most capable of forming obstructions, villicating the tender fibres, causing great heat and relaxation upon being made into ale, &c. and through the above consequences, preventing the natural secretions, excretions, &c. in the human body, it is no wonder, if the animal spirits are rendered in some degree incapable of co-operating naturally with the soul, and producing an apparent defect in the intellectual faculties; and though the defect was no greater than to render the people incapable of making timely and judicious reflections respecting their own conduct, &c. miserable consequences will ensue. The illustrious and graceful idea of doing to others as they would be done by, is lost in darkness, and that this is the case with the aforementioned people, is notorious to every judicious observer of their actions: a majority of them are so far from observing this momentous precept, that in a great variety of cases, they run a direct opposite course. This recital may, at first, be ridiculed by the intemperate, unreflecting, &c. yet, if it proves of service to mankind, I shall gain my end.

The harmony of the spheres, a sort of music much talked of by many of the philosophers, and supposed to be produced by the sweetly tuned motions of the stars and planets, is a thing we are ignorant about, not so much as knowing whether

we hear such a sound or no. For if this sound came to us, it was at a time when we were incapable of being sensibly impressed with it, as we cannot so much as remember the painful day of our birth; and if it came, it hath continued ever since without intermission, and without any sensible variation; therefore we know it not. Neither can such, as live in intemperance, know themselves properly; no, no, they are not yet arrived at full maturity, and are deficient in regard to strength of body and mind, and greatly be pitied, (notwithstanding many of them pretend to be the most knowing and greatest of men). Here we are only in a state of trial. This earth is no abiding place. Alas! a great part of the leading inhabitants of the earth are now in open rebellion against the divine laws of their beneficent maker. O intemperance! and O lucifer! what have you done? “ Adam had
 “ in himself the entire and original dominion over
 “ all those things, which afterward became the
 “ subject of particular property, when his posterity
 “ found it necessary to make and allow several
 “ shares and allotments to distinct families, so as
 “ they were not to encroach or break in upon one
 “ another. The law of nature did not prescribe
 “ the way and method of partition, but left that
 “ to occupancy or compact. So the heads of
 “ families, upon their settlement, in any coun-
 “ try, had a twofold obligation upon them. The
 “ first was to preserve the interest of the whole
 “ body to which they still were bound, and were
 “ to shew upon such occasions as required it. The
 “ next was to take particular care of those shares
 “ which belonged to themselves, so as to improve

“ them for their service, and to protect them from
 “ the invasion of others. This division of proper-
 “ ty was not made by any antecedent law, yet
 “ being once made, and so useful to mankind, the
 “ violation of it, by taking that which is another’s
 “ right, is a manifest violation of the law of na-
 “ ture.”—Bp. Stillingfleet’s works, vol. 3. p. 614.
 Nevertheless, the time is now come, when many
 deluded wretches are bent upon voting away, not
 only the chiefest property of their neighbours, but
 even that of their own children, and all this, for
 they know not what. If such persist in their ini-
 quity they will not only inevitably ruin themselves
 and posterity, but they will likewise betray their
 lawful prince and native country. The first act,
 respecting self and posterity, must be a heinous
 crime, and a flagrant violation of the law of na-
 ture; and to injure a good prince or country is
 abominable. Such as are through oppression, &c.
 reduced to a distressed and starving condition had
 better trust to their beneficent maker for relief,
 than violate his most sacred laws, and strengthen
 the hands of their unreflecting and relentless op-
 pressors, the greatest part of which are the most
 notorious, the most dangerous, and the most
 shameful hypocrites perhaps upon earth; who
 through the pitiable effects of intemperance are
 become deaf to the lamentable cries of their starv-
 ing fellow creatures. I have the dismal prospect
 of a tyrant before me, altho’ once a chosen law-
 giver, no higher than a Baronet, whose weakness
 is such, that he keeps twenty prancing coach
 horses, besides an uncommon number of others of
 different sorts, which are all plentifully fed, three
 fourths

fourths of which are, upon a judicious computation, useless, except they are kept for the purpose of grinding the face of the poor, and preventing population; in these instances, such unnatural and supercilious conduct has its effect. It would be easy to prove that on the waste, which every useless horse occasions throughout the land, and every three useless dogs, one of the human species might be supported. It is notorious to every one who is capable of sound reasoning, that a law made and continued for a long duration of years, to export corn when at a high price, with a large bounty given with it, is the most ruinous to a trading people of any thing that ever was invented. The Mogul's subjects, (being clear headed and humane) are greatly surprised to find that there is such a law in being, and look upon it with contempt; this, together with allowing the exportation of horses, encourages farmers to give exorbitant rents for farms. Rearing horses for exportation, &c. large quantities of fruitful grounds are left unploughed; and a good part of the corn, peas, beans, &c. which the ploughed land produces is appropriated to the sole use of these devouring animals. The new milk of cows is of late lavished away upon these young animals by farmers, &c. and that as much at a time as would make a good dinner for at least four such people as have been reduced to distress through the dearth of provisions. How hardly shall they that have riches enter into the kingdom of Heaven, saith our blessed Saviour? O how hardly indeed! O the dreadful effects of intemperance! O the heinous sin of ingratitude! Are not the labourers the chief support of the rich in every state? Should not the rich then

support the labourers in their turn? The ravenous beasts of the desert are far from behaving so ungenerously to their own tribes. Those who abet these preposterous evils, or keep useless animals to devour the fruits of the earth, are real enemies to population, and mankind in general. A multitude of marriages amongst the healthiest and most useful set of people must be prevented, and the main spring, viz. trade vastly retarded, to the no small hinderance of the revenue. The transportation of thieves and other criminals to America is known to be a great punishment. How comes it to pass then, that multitudes of laborious and industrious parents, with their dear helpless babes, are obliged to quit their once beloved country, and transport themselves thither for meer want? What grievous afflictions must such parents have struggled under, before they could resolve on such a perilous enterprize? and how aggravating and piercing must the above wretched scene appear to every one, who is capable of feeling for the miseries of his fellow creatures? Be it observed, that such as are not very sensibly affected on hearing of the distress of their fellow creatures are by no means properly qualified for law-givers.

Seventy, it is said, of these emigrants have perished in one ship in their voyage to America. Such intemperate, unreflecting, deluded people, must have been the means of that fatal catastrophe: notwithstanding it hath been a custom at the septennial meetings to display the most shameful and unmanly vices, yet, such as may in future follow these wicked and ignominious steps, will at the last find, that their having been a means of
starving

starving their fellow creatures, (or otherwise highly distressing the state) is little less criminal than cutting their throats and putting out of misery, at once, such poor creatures as have through their misconduct been brought to a lingering death. Instead of making the above meetings the horrid scene of brutality and corruption, &c. they ought, above all other worldly transactions, to be conducted with the greatest circumspection and solemnity, seeing that on them, the safety and prosperity of both church and state depend. I have bestowed the appellation of tyrant upon a law-giver who at present represents a venal borough; and to convince my reader, that he merits the name, I have to add, that he hath used other abominable means to distress the labouring poor, &c. besides bestowing an uncommon quantity of the fruits of the earth on useless animals. This man hath upwards of sixty families which rent houses under him, which houses, tho' in a country place, are let at exorbitant rents, even higher in proportion to the room they contain, than the houses in a majority of the cities in Europe. I am not charging him with tyranny, on account of the shameful waste he is making, nor yet on account of the extraordinary high rents of his houses. It is because he hath, contrary to the dictates of reason and humanity, oppressed his tenants so intolerably, that few of them are able to bear it, and in rigorous seasons they are not able to fly. Some of them have had the courage to make humble remonstrances against this unprecedented piece of tyranny, but to no avail; and the poor sufferers have been looking out for other habitations

bitations which may suit their callings; but alas, work is now difficult to procure. Next door to me live and indigent couple who are no longer able to labour, their ages together are about one hundred and forty years; and they have been allowed (by the parish they belong) only one shilling per week: they are even without friend to assist them, and as yet continue to live, tho' in great misery. The parish they belong to hath a work-house, but they will rather starve than undergo the severities of such an inhospitable place. That this is the case of thousands, is without a doubt. Work-houses in general are a terror to the distressed, and the very idea of being sent to a work-house will frequently make them tremble and change countenances. The allowance of sixpence a head per week, to such as can make no endeavours for a livelihood, is generally accepted, as the hardships inflicted on the miserable in such houses are shocking to human nature. What will become of this miserable old couple who have laboured hard, and been of good service to their country from their youth until they are enfeebled by old age? The shilling per week will scarce keep them alive, and recent precedents hath deterred them from entering into a work-house. They cannot sell themselves to America, being past labour. Impostors have been the cause of the prohibition of begging about the country, and suppose they were able to totter from house to house for relief, that would subject them to the punishment of a prison. But alas! there is still another unfurmountable obstacle lays in the way of begging, and that is the imminent danger of starving upon the road. Trades people, and the

the industrious, who used to delight most in distributing to the necessity of others, are now no longer able to practise that sublime virtue. On the contrary, there are an innumerable multitude of those most useful people reduced to a deplorable condition, and vast numbers struggling hard to keep their heads above water, on account of the long continuance of the dearness of provisions. As long as farmers see themselves supported by the aforementioned laws, &c. nothing but an increase of distress and wretchedness need be expected. The effects of those dreadful and ignominious vices, bribery and corruption, which are founded on intemperance, have thrown a most fruitful and beautiful country into alarming and miserable convulsions. Intemperance, we find, is capable of turning men into monsters of ingratitude. The cries of the industrious poor hath been stopped many years ago. A Roman could support himself and family on the produce of one acre of ground. This country contains at least six acres to every inhabitant, yet the abettors of oppression tell us, that the bad seasons for years past is the sole reason of the dearness of provisions. Those who are debased by intemperance, generally distinguish themselves by a selfish meanness, and narrowness of soul. If people would become temperate they would then have a natural feeling and inclination to assist each other; by which means the produce of the land might be so managed as to be well able to support more than twice its present number of inhabitants.

The number of inhabitants of this trading country, hath ever been esteemed its chiefest riches, and trade and manufactures its chiefest support. In-
tem-

temperance ought to be banished, in order that a noble and generous spirit may take place of a selfish and unnatural one, to the end this gloomy and dispirited country may again shine forth with redoubled lustre; and no earthly thing seems so able to subdue that unnatural monster intemperance, as the judicious use of pure water. It is to be hoped, that for the sake of prosperity, civil society, &c. people will make a fair trial of it. The other day, a venerable old man, aged eighty two, who had still a ruddy complexion, but extraordinary hollow cheeks, and but very little flesh on his bones, made free to enter my dwelling: his abject appearance, earnest supplication, and thankfulness for charity, was such as might perhaps have caused even an European nabob to have felt for him; he was clothed in rags, which were by no means fit to keep out the piercing cold of the then tempestuous weather: his limbs were paralytic, otherwise the cold made him tremble; his voice was hollow. I followed him at a distance to observe his speed, which seemed to be at the rate of one mile and a quarter per hour: his success seemed like that of others in his dismal situation. His parish have no work-house, and his allowance from it is not quite six-pence per week, being only six shillings in thirteen weeks. He hath been a labourer, and assisted his country for about sixty years; and must he be starved to death at last? Is this twenty-four shillings per year the reward of his meritorious service? or is it not rather contributing to keep him longer in misery? O what a state is this poor man, with thousands more, reduced to. How long shall such as preach up charity, (for mean and selfish views) highly contribute to distress

distress the industrious poor. Have you not told us
 again and again, that without a sincere repentance,
 the wages of sin is death eternal. Look to your
 own and the people's present and eternal welfare
 then, that you may be able to make your calling
 and election sure. "Humble yourselves, therefore,
 "under the mighty hand of God, that he may
 "exalt you in due time. Be sober, be vigilant,
 "because your adversary, the devil, as a roaring
 "lion, walketh about seeking whom he may de-
 "vour. Feed the flock of God which is among
 "you, taking the oversight thereof, not by con-
 "straint but willingly, not for filthy lucre's sake
 "but of a ready mind. Neither as being lords
 "over God's heritage, but being examples to the
 "flock: and when the chief shepherd shall appear
 "ye shall receive a crown of glory which fadeth
 "not away." It is greatly to be lamented, that
 the real cause of the wretchedness of the poor
 should so often be misrepresented. The unthink-
 ing will frequently tell us, that drunkenness, idle-
 ness, &c. are the cause of their poverty. It is true
 such vices are too often the cause, nevertheless
 there is reason to believe, that three fourths of the
 people now in distress have been brought to it by
 the unreflecting constituents or voters. When pa-
 rents have laboured, and made a hard struggle for
 years, in order, to stop the cries of their hungry
 children, &c. it is no wonder if the destructive
 passion of grief, together with violent labour, and
 want of proper nourishment, hath been fatal to
 many, and debilitated thousands of parents, and
 disabled them from continuing their employments.
 When this is the case, then they are generally
 charged

charged with being idle; which charge contributes highly to increase the misery of such dejected souls. There is nothing more common than to hear such as are straitened, wish earnestly that they may never have another child; the law then which obliges people to pay for having the corn exported from them, when at a high price, is against nature. The distressed are now feeding upon the brawn of wheat mixed with water, bullocks livers, such potatoes as they can procure, whether good or bad, &c. It is said that in some places, in order to keep in life, people have been obliged to take and eat blood, which they have drawn from their cows at different times. There was a loud cry made against the Spaniards, when they murdered many millions of the Americans in cold blood; a country whereon they had not the least right to set foot in a hostile manner: however a ready death is often preferred to that of a starving and lingering one, tho' the inhuman barbarities committed by the Spaniards in America were shocking to human nature. The people in any country in Europe, who have been so far misled by intemperance, and the wiles of the devil, as to see their industrious poor, and chief supporters, starve for want of bread, have sunk to a much baser degree of heinous ingratitude than can be charged to the Spaniards in the inhuman and merciless cruelties they at first committed in America. The intemperate followers, flatterers, and supporters of such as have unnaturally and undeservedly come into power, by the assistance of bribes, deceitful promises, &c. may perhaps ridicule (as is their custom) this work, or any other, which may thwart their purposes: wherefore it is

recom-

recommended to them to partake of the aforementioned friendly and healing medicine, which is capable of strengthening their mental faculties, and enabling them to judge and act according to the dictates of conscience and sound reason. It wonderfully exhilarates the spirits, strengthens the feeble knees, &c. and cannot possibly be all ingrossed by wicked men; and may be of singular service in supporting the spirits of the distressed. It will enable such as are in adversity to bear up against it with a becoming patience, and resignation to the divine will. And what is still more precious, the continued use of it will contribute highly to strengthen man's faith in the true christian belief. It is disagreeable to point out and expose people who have been the occasion of the before-mentioned woful miseries of this unhappy country. I cannot willingly get over it, as all is now at stake, and more especially, as they still persist in their ignominious and lawless iniquities, notwithstanding the many able remonstrances against them. It is a great majority of the three classes then, or constituents, at the septennial and other occasional meetings, who are the mortal and worst of human enemies to this once free country. They are the men: it is they who are drawing down a heavy punishment upon the people, and an eternal one upon themselves. I say eternal, except they repent not; for, what can be more criminal, than to be accessory to the death of your fellow-creatures? It is your selfish, brutal, and detestable conduct, which hath occasioned the long continuance of the high price of provisions, and the many miserable calamities consequent thereon. What a pitiful choice did you make about six years ago. Are not more than one third of you

brought into distress by it? And have not the greatest part of your relations and neighbours suffered most severely since that time, through the high price of provisions? This is a real fact, and a great part of you are guilty of high crimes against the state; and although you have not received temporal punishment as criminals, you have been the means of forcing the hungry and needy to steal, &c. many of which we may suppose have had the penalty of the law inflicted on them for so doing. It is a hard thing to undergo the severities of hunger, cold, and nakedness. There are still abundance of upright and charitable gentlemen in the land, who, had they been chosen, could not have winked at the cries of the distressed; but you have shamefully deceived and betrayed yourselves and the public, to whom you, as well as your ill choice, are still accountable, tho' not able to make them full compensation. How many of you have been promised places in the custom-house, to which perhaps not one in thirty have succeeded. The places in that branch of the revenue, which generally, tho' improperly, come to your share, are from twenty, to thirty pounds per year, and there are very few employments more disagreeable. The disagreeableness of the employ, the smallness of the wages, in proportion to the high price of provision, which your venality hath procured, with the disadvantages attending the living in sea ports, render most places in the customs under forty-five pounds per annum, scarce worth the accepting. Mean time, there is an express law, and that for very substantial reasons, which renders land-men incapable of holding a great part of these places. How many of you have been promised places in the ex-

cise,

thing seems to display the great wisdom of our glorious ancestors more than establishing a part of the government in the hands of the poorer sort of people. Human prudence cannot fix a stronger barrier against oppression. Nevertheless the devil's own weapon, intemperance, hath so debased the nature of man, that this barrier is in many places no longer able to resist the force of a pair of jack asses. And it seems to be nothing less than the devil's influence, which conducts these animals by pairs to the weakest parts of the barrier, where he well knows they can do the greatest mischief. This great enemy to man delights in oppression, and the preventing population, as well as war and untimely deaths. Have not you electors, adjudged, that the feller is as bad as the thief? Let the electors reflect on the conduct of those nabobs, which are so frequently, tho' improperly chose by them. Their morals are generally depraved ere ever they arrive at the age of twenty-one. I have been acquainted with many of them, and indeed sailed with one of the best of them to India; but sorry am I to say, that he was so hardened as to see many of the people on board die of the scurvy, merely for want of fresh water and fresh provisions. Our slow progress in the fore part of the voyage, betwixt Europe and the latitude of the Cape of Good Hope, was a strong presage of the fatal consequences which would attend our passing that cape, without putting in for refreshment. There were other places beyond the cape, which would have answered well for a fresh supply of water and provisions. We passed these places also, notwithstanding the scurvy had then begun to make its ravages,

ravages, the sheep, hogs and poultry on board, expended the greatest part of the people's water, nevertheless most of them were reserved for the passage home, (which conduct is customary in such ships) although live stock, which would have answered well for that purpose, might have been procured upon the coast of India. The ship's company had only one day's fresh provisions in the course of about six months. The reason for this nabob's not stopping at the cape, or Madagascar for refreshment, was his desire of getting soon upon the coast of India, in order to dispose of his private trade to the best advantage. Those nabobs who acquire wealth in this way, tho' subject to the penalty of the law, may be supposed to have committed fewer crimes, and those less enormous, than such as have been governors, chiefs, &c. in India. The scurvy affair cannot be accounted a small crime, but one of the blackest dye. The nabobs generally acquire the greatest part of their wealth by smuggling. They smuggle to India, which wrongs the proprietors of the company's stock. They smuggle at their return home, which wrongs the government, and is otherwise very hurtful to the nation in general. These large smugglers create abundance of small lurking smugglers, and what can be more mischievous to the state? Are these law-breakers then to be imposed upon a nation for law makers? will such men as these consider or feel for the distress of the industrious poor, or will they not rather contribute to increase it? I have bought my constituents, says a law-giver, and I will sell them again. There are men who are not naturally qualified for law-givers, yet are not better than nabobs,

and yet have the misfortune to be chose into that state; I say, the misfortune to be chose; for such as have been so far mistaken as to imagine they are not in duty bound to watch over, and lend their best assistance to support the main body of the people, whether they be in distress, or otherwise wanting reasonable redress, will at last find themselves most miserably deceived. It is highly incumbent on those who wear the gown (instead of contributing to distress the industrious poor) to instruct the electors and elected no longer to aim at base and selfish ends, but the general good of mankind. The land is still very fruitful, thank God, and if rich men were to behave as generously to their fellow creatures, as they do to the brute creation, there would be no ground for complaint. The bee sets us a noble example of industry. A modern author observes, that “ the hive
 “ is a school to which numbers of people ought to
 “ be sent; prudence, industry, benevolence, public spiritedness, oeconomy, neatness, and temperance, are all visible amongst the bees. These
 “ little animals are actuated by a social spirit,
 “ which forms them into a body politic, intimately
 “ united, and perfectly happy. They all labour
 “ for the general advantage: they are all submissive
 “ to the laws and regulations of the community;
 “ have no particular interest, nor distinction, but
 “ those which nature or the necessities of their
 “ young have introduced among them. We never
 “ see them dissatisfied with their condition or inclinable to abandon the hive in disgust, to find themselves slaves or necessitous: on the contrary, they
 “ think themselves in perfect freedom, and perfect
 “ affluence; and such indeed is their real condition.

“ They

“ They are free, because they only depend on the
 “ laws ; they are happy, because the concurrence
 “ of their several labours inevitably produces a-
 “ bundance, which contributes to the riches of
 “ each individual. To which let us compare human
 “ societies, (particularly by those in Europe) and
 “ they will appear together monstrous. Necess-
 “ sity, reason, and philosophy, have established
 “ them for the commendable purposes of mutual
 “ aid and benefits: but a spirit of selfishness de-
 “ stroys all; and one half of mankind, to load
 “ themselves with superfluities, leave the other
 “ destitute of common necessities.”

We have no precedent in the whole brutal
 creation, which represents so base a degree of
 ingratitude, as that of selfishness. How long
 shall men, who will not work, starve those indus-
 trious people to whom they are indebted for almost
 every necessary they receive? Hath not the effects
 of intemperance impowered the devil to overturn
 reason and humanity in these very people, who,
 through their learning, stations in life, &c. ought
 to have been examples of good works. Seven
 years have I been conversant with the Mogul's
 subjects; his country is of very large extent, and,
 on this account, may be supposed difficult to
 govern well; yet I never saw a quarter of the
 distress and wretchedness amongst his subjects as
 I have observed in Europe; a country infinitely
 more fruitful than the Mogul's Empire, tho' per-
 haps not so populous. What means all this self-
 ishness? To what purpose is it? We brought no-
 thing into this world, and it is certain we can
 carry nothing away. Man was created to love
 God,

God, and to do good to his fellow-creatures, and the noblest virtue of his soul is charity. Shut no longer thine ear therefore against the cries of the poor, neither harden thine heart against the calamities of the innocent. When the fatherless call upon thee, when the widow's heart is sunk, and she imploreth thy assistance with tears of sorrow, O pity her affliction, and extend thy hand to those who have none to help them. When thou seest the naked wanderer of the street shivering with cold, and destitute of habitation, let bounty open thine heart; let the wings of charity shelter him from death, that thine own soul may live. Whilst the poor man groaneth on the bed of sickness, whilst the unfortunate languish in the horrors of a dungeon, or the hoary head of age lifts up a feeble eye to thee for pity; O how canst thou riot in superfluous enjoyments, regardless of their wants, unfeeling of their woes!

Let not man, whose very short and uncertain pilgrimage on earth, think it a small crime to oppress his brother; for it is quite the reverse, and appears monstrous to every upright and discerning man, notwithstanding it hath long been in practice. What can the present oppressors and their abettors plead, at the general and final judgment, in their own behalf? Will they say, they followed custom? this will have no weight at that awful tribunal. Will they plead that their misconduct was owing to intemperance, which weakened, and let satan in upon them? This will not answer their purpose. Intemperance itself being absolutely forbid, as being the mother of crimes, diseases, &c. Too many premeditated plans for enriching themselves,
bear

bear witness against them, and leave no ground for their defence; had the industrious and laborious been as viciously inclined as the indolent and effeminate generally are, neither racking upon the wheel nor riot-acts would have deterred them from making forcible endeavours to allay the pangs of hunger, and the pains occasioned by cold and nakedness. But far be it from me to encourage intestine broils. I am quite averse to any thing of the kind; they are abominable. I therefore most seriously recommend it to the needy to wait longer with their wonted patience, better times it is to be hoped are near at hand. He who knows how to reap the greatest advantage from a labouring animal, will neither hunger nor otherwise starve him. How much less then ought man to distress his brother. O weak and contemptible wretches to what a depth of ingratitude are you sunk! How hath intemperance and the devil missed you? Of all the various sins committed by man, none seems more mean and base than that of ingratitude; it has a hideous aspect, and shews that the man who is guilty of it hath but a dark prospect of the law of nature. Where is his charity, and where his love? Intemperance and the devil root up the seeds of charity, and supply the place with pride and avarice. Intemperance itself turns natural love into unnatural lust. Intemperance and the devil seem to have been the cause of several evils in the first ages of the world. Necessity, reason, &c. induced men for their mutual good, to fix upon laws and rules whereby to govern themselves; and in order that such laws should be observed, they appointed magistrates

magistrates to see them properly complied with; but how such magistrates have since unjustly incroached upon the people, and abuse their trust, is too notorious to be insisted on. There are none who govern after a despotic manner, can shew the least right for so doing, such government being against the law of nature and common reason. The glory of a king is the welfare of his people, his power and dominion resteth on the hearts of his subjects. The scepter of power is placed in thy hand: but not for thy self were these ensigns given, not meant for thine own, but the good of thy kingdom. The spirit of a man is in him; severity and rigour may sometimes create fear, but but can never command his love.

C O N C L U S I O N.

THE illustrious reformers of the church saw the eager and successful attempts which satan made upon the princes, magistrates, pastors, &c. of the people, and therefore appointed suitable prayers to be offered up to God, by the people, in their solemn assemblies, in behalf of them: although the prayers of a righteous man availeth much, what but the just vengeance of an offended God can be expected, from the surprising increase of intemperance, which it is too plain weakens and corrupts the human understanding, and thereby lets in the power of satan, who, it appears, is ever striving to lead captive, at his will, these men who have the greatest power to destroy, oppress, &c. for to destroy and oppress our fellow-creatures, is running directly against God's commands, and according
to

to the will of our avowed and most dangerous enemy, the subtle serpent. Therefore it is high time that the leading men in office, &c. be apprised of their mistake, that they may join with their people in the common cause against intemperance, instead of oppressing and warring against each other. These are the very worst of employments, and employments of a far more excellent nature might be taken in hand, which would be well pleasing in the sight of our most Gracious and Omnipotent Creator. In gratitude therefore to God, and for the benefit of mankind, I propose to the leaders and the rest of Europe, another employment, viz. Barter with the Jews, and Gentiles. Give and take. Give pure religion, and receive their cleanly and salutary customs. Teach them without superstition the gospel of Christ, in its greatest purity, and learn from them (it was from them I received it) how to make the best use of pure water. Draw near to them in a cleanly and temperate manner, and they will draw near to you; and let us in the name of God be one fold and under one great shepherd. Then may the wolf dwell with the lamb, and the leopard lie down with the kid; and the calf, and the young lion, and fatling together, and the little child lead them; and the cow, and the bear, feed their young ones, and lie down together; and the lion eat straw like the ox. And then may the earth be full of the knowledge of the Lord, as the waters cover the sea.

F I N I S.



